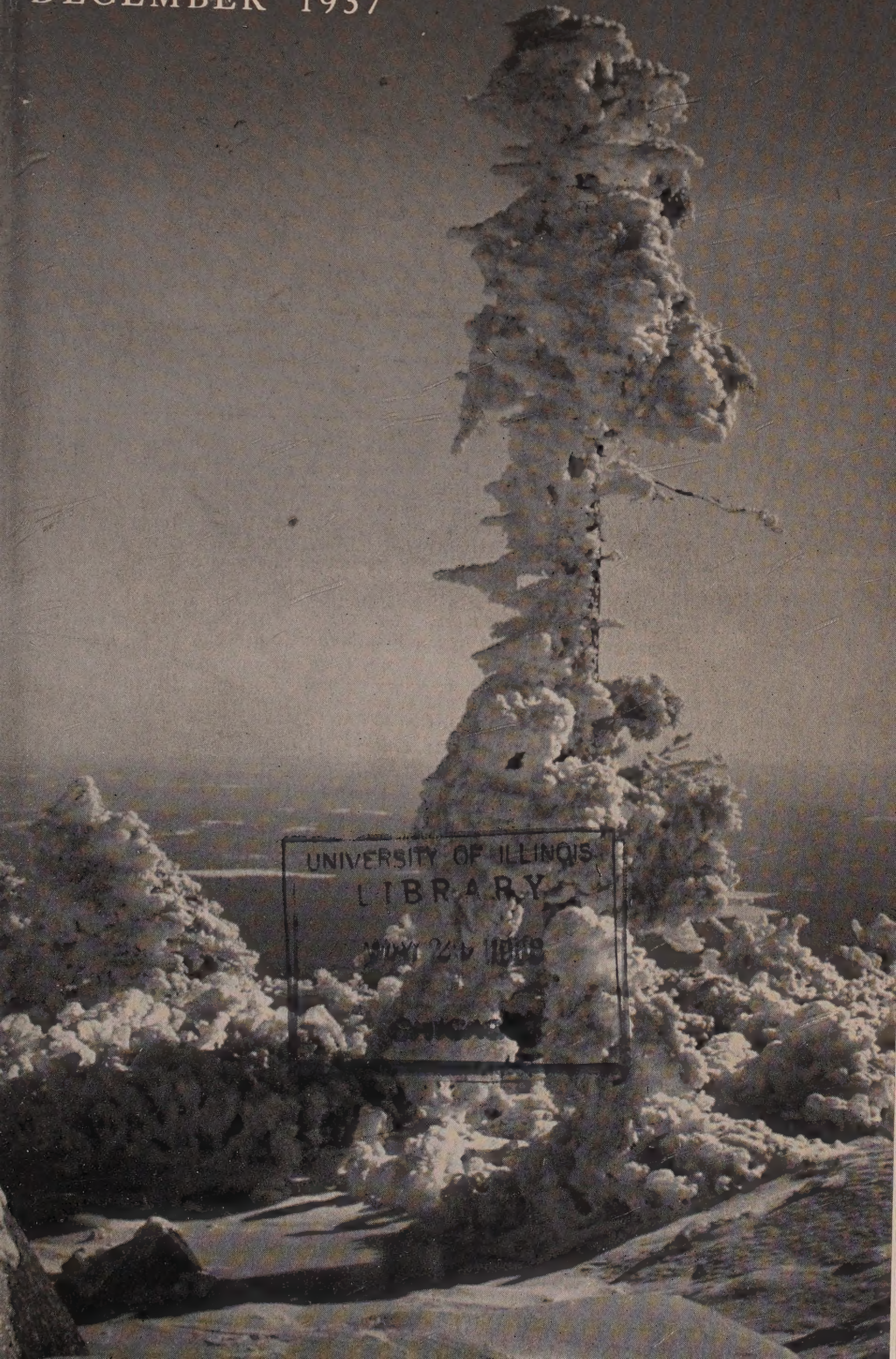
APPALACHIA

DECEMBER 1957



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DECEMBER 15, 1957 MAGAZINE NUMBER 125

CONTENTS

On Monadnock ....*Frank H. Wood* Cover

Class VI Climbing in Yosemite Valley ....*Robert L. Swift* 441

Large and Small Giants of the Himalaya ....*Wilfrid Noyce* 453

Up the Magalloway River in 1861 ....*Marshall M. Tidd* 457
Sketches by the author

Land-Use Planning for the W.M.N.F. ....*Gerald S. Wheeler* 472

Skyline Sketches
The Inquisitive Bear ....*Robert McConnell Hatch* 479
A Day on the Middle Fork ....*Thomas J. Glennon* 481

Resurgence of the Fisher in New Hampshire.*George T. Hamilton* 485

Climbs in the Central Chugach Mountains in Alaska
....................................*Lawrence E. Nielsen* 491

Schoodic Mountain, Maine ....*Charles B. Fobes* 498

Armchair over Chocorua ....*Edgar F. Wright* 502
Sketches by the author

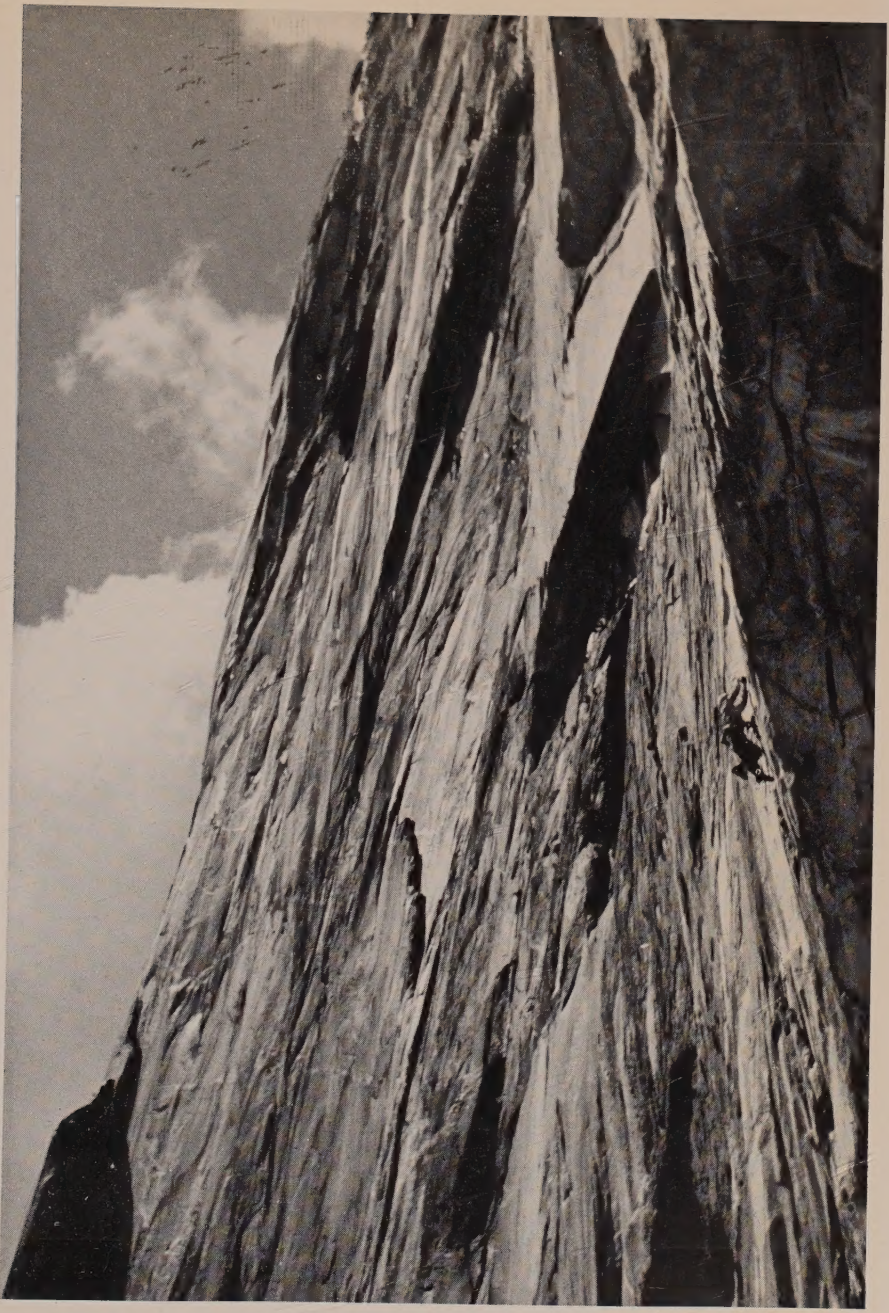
Ascent of Mount Michelson, Alaska ....*John P. Thomson* 508

Kearsarge North Regains its Name
.............................*Arranged by Miriam Underhill* 511

Various Notes

Alpina 522
Climbing in General 523
Skiing 528
Canoeing 530
Excursions 533
Huts and Trails 537
Roads and Railways 542
Conservation 543
National Parks 546
Personal Items 549
White Mountain Quiz No. 6 550
Science 551
History 551
Accidents 559
Montalbaniana 572

Book Reviews 577



Allen Steck

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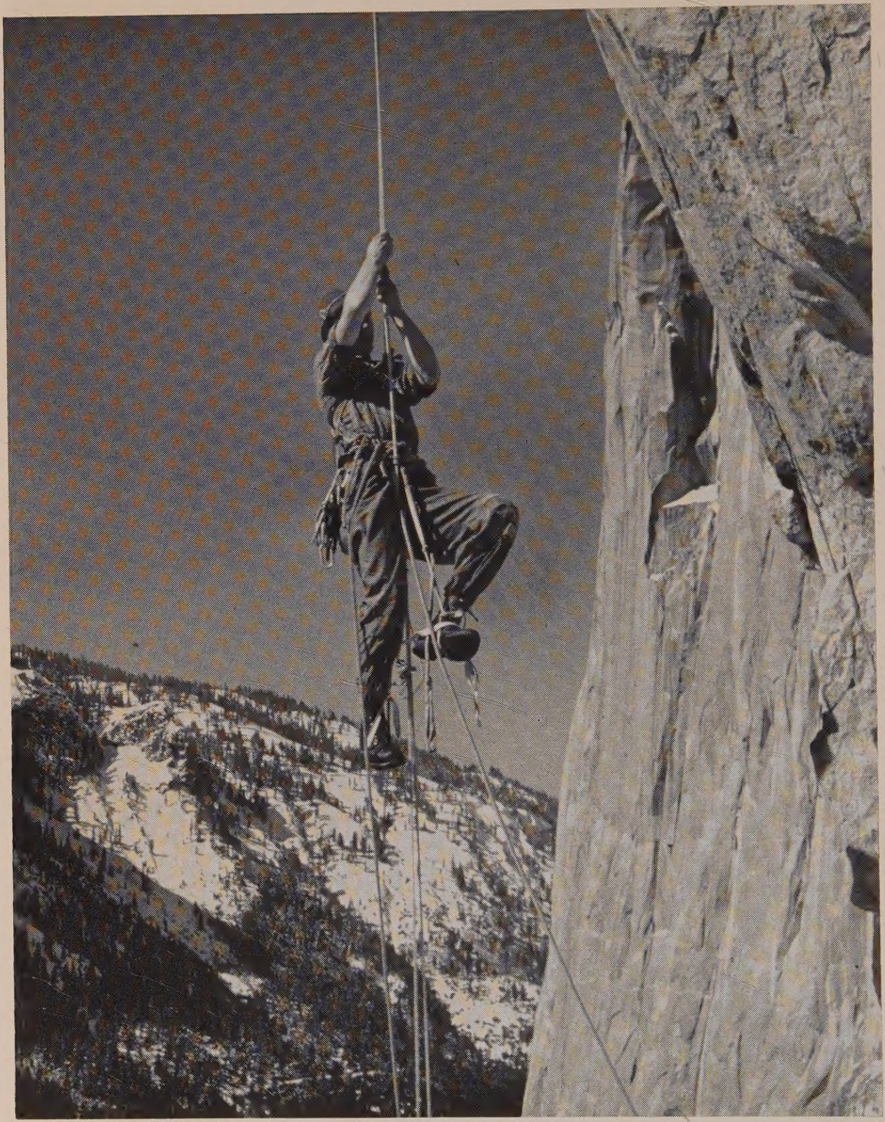

Allen Steck

CLIMBING A FIXED ROPE WITH PRUSIK SLINGS

CLASS VI CLIMBING IN YOSEMITE VALLEY

by Robert L. Swift

Flashes of light in the murk below, the crashing of brush and the rattle of boulders marked someone's approach to the base of our climb. It was 9.30, half an hour past firefall and very dark in Yosemite Valley. For a moment we could hear heavy breathing and the mumble of voices below, and feel eyes searching up toward us. Then, fearful that their friendly concern for our situation might be recognized for what it was, Jerry hailed us with a mild taunt.

"How's the bivouac?" he called.

"Bivouac? Hell, we're still climbing," was Warren's reply. To emphasize his words he called for slack. The rope rattled out through a long chain of carabiners and snapped into place at the next bolt. As I took in the surplus and gave tension his headlight retreated another three feet upward. The monotonous tink-tink of hammer on rock-drill began again as work was started on the next bolt-hole. Beside me on the belay ledge John rasped away furiously at sharpening a spare drill.

Our little act must have carried conviction, for we could almost feel the reaction of "My gosh, they really are climbing!" from the audience below. We exchanged a few words about the day's work and then, properly squelched for having shown interest in our project and concern for our welfare, Jerry and Don shouted their goodnights and crashed back toward the road.

Alone again, we continued our bolting project to the point from which we hoped to be able to use pitons, and then settled down for the bivouac.

Probably this incident on the East Buttress of Middle Cathedral Rock typifies the attitude of many toward tension climbing in California. Certainly this bolt ladder was the most talked-about part of that particular climb. But there were parts of the climb which called for more than routine mechanical techniques.

Techniques may be transplanted, but not traditions. So when roped climbing was introduced into California during the early 1930's the climbers were aided by what could be learned of Euro-

---

Robert L. Swift, of Moss Beach, California, is a teacher of science. He is a prominent member of the Sierra Club, having been chairman of the Rock-Climbing Section of the San Francisco Bay Chapter, and a member of the American Alpine Club. He has been active in mountaineering for the last ten years, having climbed not only in California but in Canada, Mexico and the Himalaya, where he was a member of the 1956 British-American Karakoram Expedition. In the present article, which he wrote at the request of the Editor of Appalachia, he shows by means of concrete examples how the technique of direct-aid climbing has developed in that region of the United States where it was first adopted and has been most intensively practiced.

pean methods and equipment, but were free to develop their own ideas of what would be good climbing practices. From the first, two major concerns have guided the development of our attitude toward climbing. Preservation of the climbing areas for those who are to follow is one, and climbing safety the other. Beyond these two there have been few restrictions, and climbing has developed along whatever directions afforded the most enjoyment to the participants.

The morality of using pitons to protect the leader, ropes on easy but exposed routes, or footwear of any desired sort is very seldom questioned. As for direct aid, few who learn their climbing in one of the California groups object to using it when a small amount is required in the midst of a long and otherwise unaided route. The problem of ethics enters only at the point where a considerable portion of the route must be aided by artificial anchors, or where permanent, expansion-type anchors must be placed in the rock. Many climbers, at about the time they first become competent to direct their own parties, show a great enthusiasm for the extensive use of pitons for direct aid. The matter is generally self-resolving, for the eagerness is often lost through experience. When the reality of extended leading on tension fails to conform to the preconception, eagerness wanes and the climbers return to the more familiar types of roped climbing. Such leading isn't all just fun. For one thing, though quite explicit in their expositions of double-rope technique, few manuals of climbing explain what to do when the driving of a second piton widens a crack and causes the first piton to fall out under the stress of the leader's weight. Then again, while the responsibility for removing pitons is usually delegated (in print, at least) to the second man, this has not prevented a good number of leaders from discovering a method, sometimes called "the zipper", for doing the job themselves. And finally, even when skilfully done Class VI climbing has a remarkable capacity for increasing the number of stiff muscles, bruised ribs and scraped knuckles which can result from a weekend's climbing.[1]

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[1] The system used in this article for classification of climbs is that employed by the San Francisco Bay Chapter of the Sierra Club. Rather than giving a direct, subjective indication of the difficulty of a pitch or climb ("very difficult", "severe", etc.) it describes the equipment which the average climber will find desirable. A Class I rating indicates that no special equipment is needed. Class II climbs are those on which proper footwear (lug-soled boots, etc.) are desirable. Class III means a "scramble". Hands are used on the rock, and a rope is available in the event of need. Class IV is used for roped, consecutive climbing. Pitons and carabiners should be available to the party, but are not placed, either because of the shortness and ease of the pitches, or because the first man can protect himself by leading the rope around trees, rock points, etc. Simultaneous climbing by two or more members of the party is not recommended on rock, and hence no classification for this is given. In Class V climbing pitons, rope-slings or expansion bolts are used to

If some climbers object to the use of artificial aids on ethical grounds, and a majority of those who are without such scruples find serious disillusionment, how can this type of climbing persist at all? Is it because we are so desperate for things to climb that we find it necessary to endure the discomforts of tension climbing? No, the nature and the history of direct-aid climbing in Yosemite do not indicate that it has developed as a last resort.

Periodically it has been felt that there was nothing left to climb in Yosemite. The announcement of this view has never marked the end of climbing, but merely the close of one phase and the beginning of another. The feeling developed in 1885 after Grizzly Peak (now considered a scramble) had been climbed for the first time by Charles A. Bailey. Grizzly Peak was the last summit of the type which was then considered a desirable objective: high, prominent, commanding and aloof. The word "easy" should not be read into the preceding list of characteristics, for some of the ascents were, and are, anything but that. Mt. Starr King had been climbed a half-century before anyone devised the system by which it is now classified as an ascent requiring the use of climbing boots and ropes. When, in 1875, George Anderson stood atop Half Dome he left in his path a long string of what would today be called expansion bolts! What the mountaineers of that age considered worthy of their efforts had nothing in common with the word "simple".

The next phase in the climbers' exploitation of Yosemite was a more intimate exploration of the intricate mass of gullies, ridges and lower summits about the Valley. Among others, William Kat and Charles Michael excelled in an adventurous sort of route-finding and pioneering. Their solo ramblings often involved climbing of a standard which few of today's climbers find appealing without the assurance of companions and equipment. A second phase of climbing thus matured, during which there was established the network of off-trail routes familiar to the present generation.

Both these earlier types of climbing, however, seemed limited to devotees who could spend considerable periods of time in the Valley and who had sufficient stamina and enthusiasm to endure

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reduce the distance a falling leader would travel, but they are not employed as hand- or foot-holds. In Class VI (also called "direct-aid" or "tension" climbing, but seldom "artificial" in this area) either a direct pull on the rope is necessary, or pitons or other anchors are used as hand- or foot-holds, or as points from which slings (foot-loops or stirrups) are suspended.

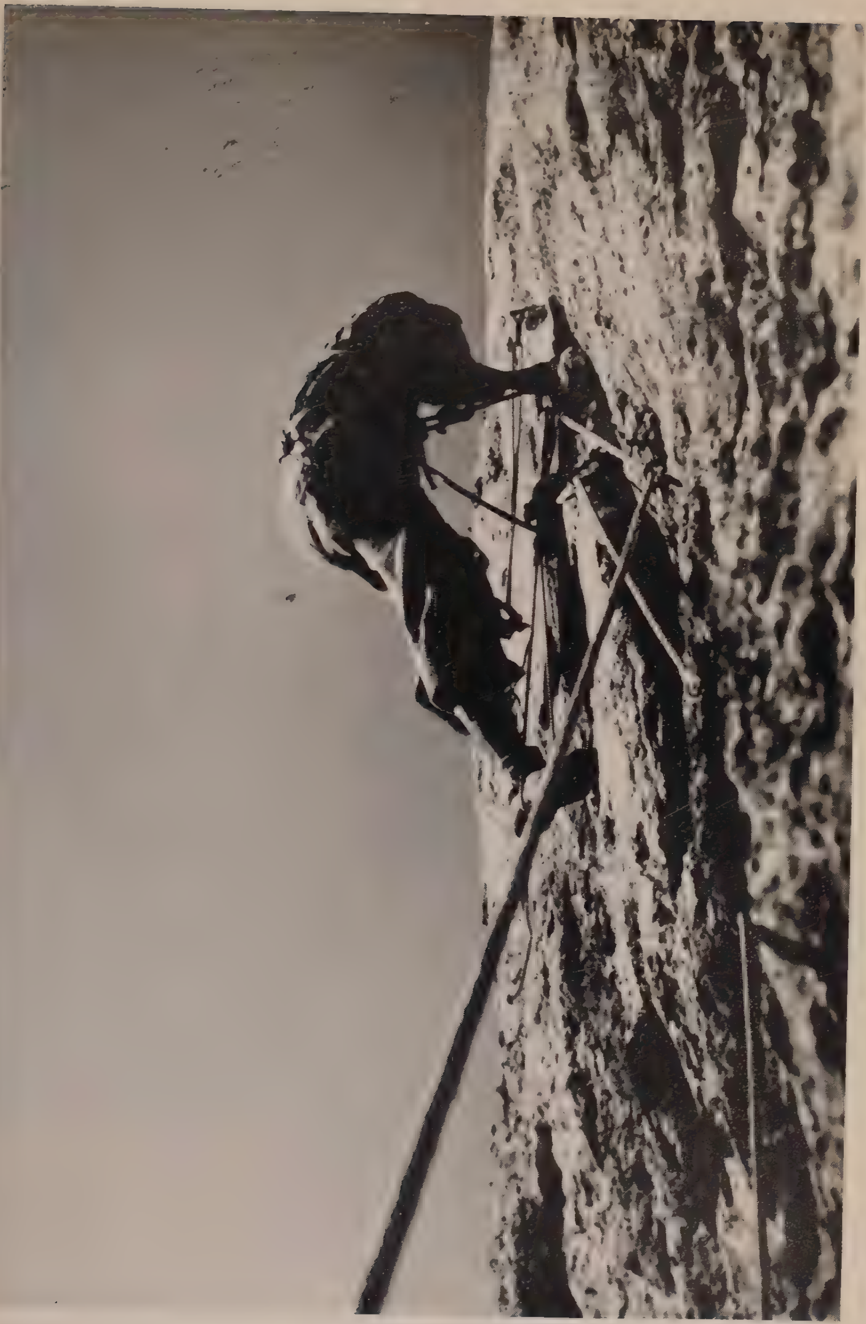
In the Los Angeles—San Diego area this system is retained, with the addition of decimals to indicate the degree of severity within the class. Thus a 5.1 or 5.2 is a pitch requiring a piton or two for protection, but not calling for any unreasonable amount of skill. A 5.9, on the other hand, is a pitch which calls for the best efforts of a highly capable leader and would require the use of direct-aid by many climbers. This system is rapidly spreading in popularity.

brush and talus. During the 1930's Yosemite was becoming more accessible to the population centers of the San Francisco area, and vacationers and even weekenders were finding the Valley an objective increasingly easier of attainment. To satisfy the mountaineers among these there was needed a form of climbing whose goals could concentrate into the hours of a day the adventure and activity of a week's walking or scrambling.

The door was opened when R. L. M. Underhill introduced to Californians the European concept of climbing with ropes, pitons and tennis shoes. A distilled essence of active participation in Yosemite's climbing potentialities was now available. Difficult cliffs and summits became reasonable objectives for short-term visitors, and Yosemite's finest and most distinctive resources could be enjoyed for the first time. Elsewhere there were high peaks to be climbed or unknown watercourses to be followed, but nowhere else were there such spires, crags and walls.

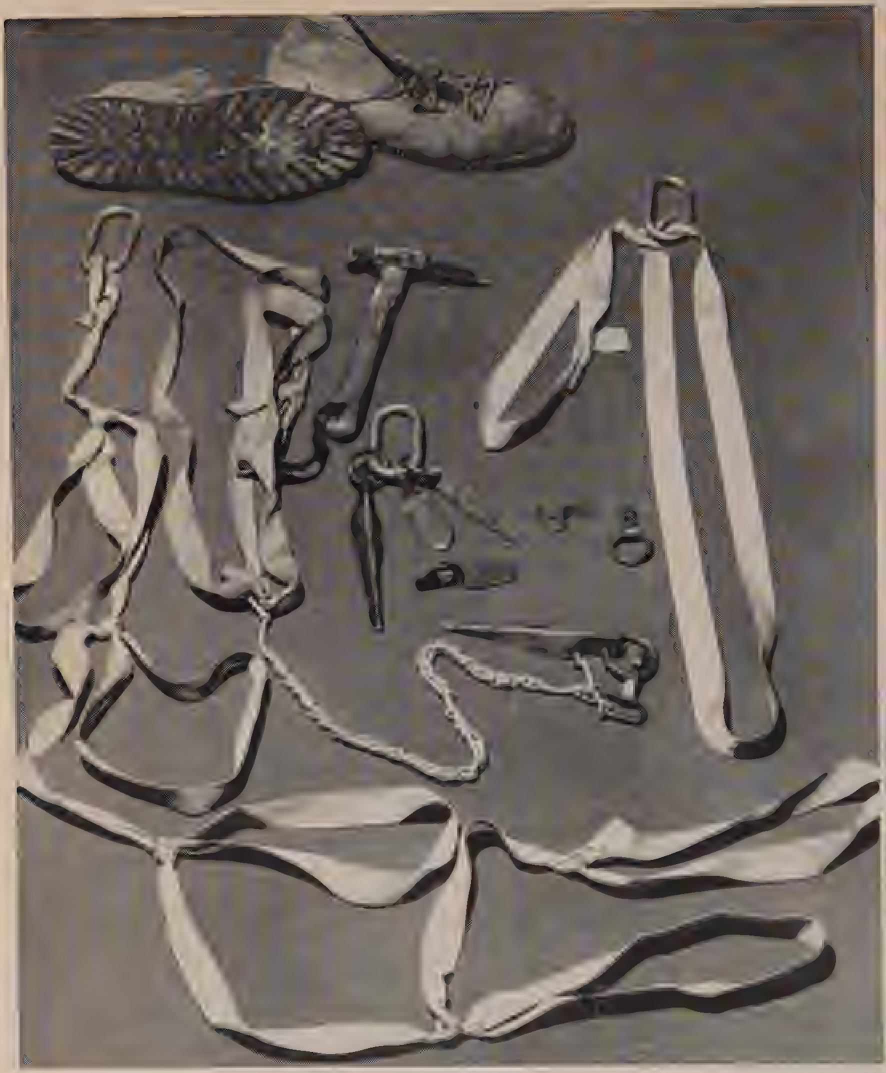
A non-climber might suppose that the first objectives to be selected would be the easier ones. Then, as the supply of these diminished and as climbers gained experience and perspective, there would be a gradual increase in the severity of the routes attempted. Such a process occurred to some extent, but the difficulty of an objective is one of the primary factors in making it desirable. Another factor is the sort of esthetic appeal which certain rocks offer. In the Cathedral Spires both factors were present. The two spires were obviously very difficult objectives. And there was about them that simplicity and purity of definition which present a strong appeal to the climber. No need here to stipulate by what sides they ought to be climbed, or what hand- and footholds would be considered "off route". Getting to the top by any route or method would constitute a fine adventure.

Thus the Spires were among the first objectives to be chosen in the new era of climbing, and first ascents of both were made in 1934 by Jules Eichorn, Dick Leonard and Bestor Robinson. They have remained among the most popular climbs in Yosemite and typify the climbing there. It is interesting to note a development here. On the Higher Spire there are two points where the direct aid of pitons has been considered necessary by most. Until recently nearly all climbers used pitons with foot-slings in traversing into the Bathtubs, and again, higher up, at the Rotten Chimney. Then, first, it was discovered that the loosely piled, overhanging blocks high in the Rotten Chimney could be by-passed by the use of an inconspicuous hold leading to a Class V alternate. The variation has won rapid acceptance. Most local climbers probably regard this variation as being advantageous because it reduces the time necessary, rather than because it corrects an ethical discrepancy. Secondly, it has been shown more recently that a truly skilful leader can reach the Bathtubs without help



Robert L. Swift

DOUBLE-ROPE TECHNIQUE WITH FOOT-SLINGS



Allen Steck

TYPICAL CLASS VI CLIMBING EQUIPMENT

Pitons of various types, including a chrome-moly knife-blade; carabiners; piton hammer; piton-saver or guard, attached to braided cord; foot-slings of two different types. Metal strap with ring is a bolt hanger.

from the rope. But this variation lies very near the upper limit of what the average leader is likely to consider a safe move. At such a distance from the road a fall resulting in even a sprained ankle would be quite a nuisance. So the leader, after looking it over, decides that his kletterschuhe are inadequate for the task and that, without tennis shoes, he had better use tension. The second, looking ruefully at his tennis shoes, declares he "could do it if only I'd worn my kletterschuhe today", and follows with some help from the rope. Though resolved to "try it Fifth" another time, neither feels that the day was a loss.

Many of Yosemite's routes can be compared to the Higher Spire in their standards of difficulty. Because of the extremely reliable granodiorite on which the routes lie there is little danger of the holds pulling out. The tendency then is to climb where holds are no more numerous than necessary. Another characteristic of some routes is their length, with many of the favorites consisting of from six to twelve pitches. The popular climbs are likely to be those which are both long and free of extraneous or over-large holds. But even in Yosemite it is not easy to find a long succession of pitches of matched difficulty. If a route is selected consisting of eight pitches, five of which come close to the average leader's safe limit, then two of the others may be a little easier than would be desired and the eighth something more than practical. The Royal Arches and Lower Cathedral Spire are both of this sort. Each is a favorite route which, after many years of popularity, has been climbed totally "free", but most parties find direct aid necessary or desirable on one pitch of each.

The number of routes upon which tension climbing predominates is few. Of these, standing out above all others is one, a now-popular classic, which is unlikely either to be downgraded or to lose its zest. That climb is the summit portion of the Lost Arrow. After the notable first ascent from the bottom by John Salathe and Ax Nelson, the entire rock was left alone for a period of nearly five years. Perhaps neither the idea of re-living the memorable five days of the first ascent nor that of short-cutting them appealed. But the section consisting of the summit rise, at least, was too attractive to be neglected forever.

During 1952 two bumbling attempts by Bay Area climbers (including myself) to reach the top from the notch ended in failure. Our best attempt went only slightly higher than the point reached by Salathe during a preliminary solo climb! With much embarrassed coughing and frequent misuse of the word "reconnaissance" we abandoned the effort. Next year the route was deftly reopened by San Diego climbers led by Royal Robbins. Since then the summit section has become rightfully popular.

A 300-foot rope-down from the Valley rim brings the party to the desolate notch known as Third Error. From here four pitches lead upward to the top. The first starts in routine fashion, but after ten or fifteen feet it presents a dash of spice. High to the right is a pair of excellent handholds, affording just enough purchase, possibly, for a pull-up. Initiative to leave the security of the foot-loops is provided by the failure of the crack to take further hardware, and the climber is faced by one of the most delicate problems in Class VI climbing. He may kick his feet out of the slings and climb free for some distance, but he will be hindered by the rope dragging through the pitons already placed. If unable to reach a good position he will find it very difficult to re-engage his feet in the stirrups while hanging on with both hands, and welling up in his mind is the recollection that he has been placing pitons only to support his weight, and not with the view of their sustaining a fall. In climbing upward, then, he hopes to find a stance which will leave one hand free to place a piton. At least one of his slings has been left behind, and in such cases its loss is sometimes felt.

In the particular situation being described here it is fortunately possible to stand on the handholds after pulling up to them, so long as one hand is used to maintain balance. Unfortunately, the next few feet of rock are absolutely smooth and the freedom of *both* hands is required for the placing of an expansion bolt. When asked how he stood here for twenty minutes, both hands above his head, and drilled the bolt without toppling over backward, Salathe explained, "It's easy. After the first quarter-inch you've got something [the drill] to hold onto."

More pitons lead to a belay ledge. The second pitch is short, vertical and exposed. It would be a joy to climb, conforming in all respects to explanations of "how to climb on tension", except that the pitons are reluctant to stay put. One of the local climbers, Dick Irvin, has proved particularly adept at falling from this point, and the author is renowned for never having come off it. The recommended secret of success is to lead the easier first pitch, thereby making it "someone else's turn".

The third pitch is the best of all; pitons are secure and the isolation and view are incomparable. A couple of transitions between free and aided climbing prevent tedium from setting in, and then the last succession of bolts to the top is seldom resented. If more climbs of this sort were available there would be no dearth of tension-climbing enthusiasts.

Having been shown that the top of the Arrow was anything but loathsome, Frank Tarver and I reconnoitered the first few pitches above the base during the spring of 1954. There too we found enjoyable climbing, of the more typical Yosemite type. Free climbing was interspersed with occasional situations in which four or five direct-aid pitons were required. Where then, we asked, was the Lost Arrow which had caused such difficulty seven years ago? What was there, in the few hundred feet of chimney we hadn't yet seen, which could have gained the Arrow its grim reputation? Even if we had to use pitons the whole way it shouldn't take too much time or effort to connect up the portions of the route we had already surveyed. So, joining with Warren Harding, we set off to find out what makes a "horror climb".

Most climbers I have met, if they know of any Yosemite climbs at all, have heard of the Lost Arrow. Invariably they think of it as a long line of pitons, and most of them consider those who ascend it to be unmitigated rock-engineers. "Rock-engineer", of course, refers to the type of person who, unable to hold his own in free climbing, resorts to piton-pounding. But those who may hope to "nail" someday all the difficult parts of the Great Chimney, thereby rendering it a long but innocuous grind, will be disenchanted. I, for one, was certainly surprised.

In order to save time we climbed everything we could Fourth or Fifth; placing and removing pitons is a time-consuming monster. As the severity increased we were forced, even Harding and Tarver, to rely on direct-aid for the leads. This was what we had expected, but as difficulties continued to compound we became aware of a disconcerting truth. When piton-cracks run out there are *two* alternatives: expansion bolts or Fourth Class. Eight hundred feet of climbing with a bolt every four feet . . . half an hour per bolt . . .? Besides, John and Ax had done without; so then would we. We hadn't two hundred bolts, or the inclination to place them, but we did have Harding. There followed some of the most hair-raising leads I ever hope to see. For forty, sixty or eighty feet at a stretch Warren led unprotected up the flawless granite. The worst pitches were flaring jam-crack chimneys, accepting only one hand and one elbow, and requiring the utmost in agility backed by considerable strength. That was the key to this great "Sixth-Class" climb! When all memories of joyous tension-leads above and below the Great Chimney have faded, I shall still remember (with a shiver) Warren's chilling "Fourth-Class" leads. The climb can be done without an exceptional amount of skill in tension climbing, but not without a climber or two in the party.

At times we think back to the Yosemite of a hundred years ago and imagine with envy the prospect of those who could survey the entire legion of Yosemite's walls and summits as yet unclimbed. Many of the best are gone, and now we must seek specific routes if we are to be first on something. So when the pioneer spirit comes out in us we search for objectives within our own domain, the steep and difficult.

In the spring of 1954 Warren suggested that we try the Middle Cathedral Rock (adjacent to the Cathedral Spires) by its then unclimbed East Buttress. Though clean and simple in outline, this arête had not yet been attempted, a status which could not last forever. Several hundred feet in length, it would be a long climb and a difficult one; for some reason I was hesitant. There were just too many simpler, more easily enjoyed things to do. I hedged.

"How about Labor Day?" I tried. "Fine," said Warren.

Suddenly it was fall, and there we were, starting the climb. Enlisting John Whitmer, a staunch veteran of many good climbs, we set off. That there were three of us was no coincidence. On routine climbs it is usually considered a handicap to have this number in the party, with four (in two ropes of two) being faster when two is not enough for strength. But it has been our experience that on climbs of two or three days' duration two men will expend too much of their energy in hauling up the packs. With an added fourth there would be no gain in the time saved, as there is in Fifth Class, since the pitches were expected to be of such quality that leading them once would be sufficient. We tied in with 7/16-inch nylon ropes 120 feet in length. This is the standard length at present, but longer (i.e. 130-foot) ropes are considered desirable. Reflecting that climbers of twenty years ago generally thought a 60- or 80-foot length between each two climbers was sufficient, we often wonder where the trend will lead! For hauling up the pack there was a length of light hemp line, and a major contribution to the weight of our pack was the 300-foot, 5/16-inch nylon rappel. Our confidence had not overridden discretion.

The rest of our load consisted of a sweater each, a quantity of chocolate and canned tuna, and something like twelve quarts of water; we anticipated three or four days on the rock. There were also some oddments of hardware, including the bolts, though most of this was carried on our persons. Total weight for a pack of this sort runs to about forty or fifty pounds. On occasion we have attempted to have the second man wear the load while climbing, but this usually proves more exhausting than allowing the first two climbers to haul it up. Our undying gratitude will go to the designer of a lightweight packsack which will not rip, abrade or hang up under overhangs!

For our hardware we carried about thirty pitons—the usual range of horizontals, rings, and slender and wide-angles, with a few small vanadium steel horizontals added. Several of the chrome-moly knife-blade pitons would now be included. All this, together with some twenty-five or thirty dural carabiners, was suspended from a loop to be slung over the shoulder of whoever might be in the lead. Each of us had his own set of three looped slings for foot-stirrups. These are generally of nylon tape, in either the ladder or the two-loop pattern. Reinforcement of these by the aluminum rungs favored in Europe is not common. Since most climbers here wear either kletterschuhe or boots, there is no undue discomfort to standing in the flexible loops. They have the additional advantage of being easily stuffed into a pocket or pack when not in use.

At the end of a short talus hop from the car we found ourselves at the base of our route. The first pitch went Fifth, and the second mostly Fifth after an assist from two or three pitons. The next lead was definitely Class VI and not of an especially enjoyable variety. Pitons seemed insecure, and the only logical stopping-place was something less than an ideal belay ledge. The day was still and hot; time passed rapidly. One man would lead and a second follow. Then, with the third man helping to guide its direction, the two upper men would haul up the pack. Finally, if space allowed one of the two top men would belay the third, who of course removed pitons, while the other upper man coiled ropes and organized preparations for the next lead. Somewhere near this point there was a fine Sixth-Class lead. A clean vertical crack in a right-angle corner accepted angle pitons easily and held them firmly. In no time it became mid-afternoon. The climbing was by and large pleasant, and we were happy to be above the babbling Labor Day throng.

Now we had reached a ledge. Though not conforming to any regular geometric shape it was roughly two feet wide and a dozen feet long. At least there was room for all to sit. We assembled here to view the prospects. There was no complexity about the route, for we could see considerable areas of the wall to our left and right, as well as directly above us, and all was nothing but blank granite. Sixty feet up, an overhang, fractured by several cracks, gave hope that there pitons would again be useful, but that sixty feet of rock was holdless and showed no sign of a piton-crack. Seldom have I seen a more perfect rock face; its average angle I should estimate at seventy-five degrees. Out of the pack came the bolts, and we went to work.

In a situation of this sort there is little worry that by placing a permanent anchor in the rock a climber will be spoiling either the appearance or the sporting aspect of the rock face. From the Valley floor bolt-hangers are invisible, even if binoculars are used. And another climber who reaches this point will need the bolts himself. It is only when an unskilled climber places a bolt at a point where a temporary piton would suffice that the sight of a bolt-hanger becomes odious. There seems to be fairly close agreement among California rock-climbers as to when a bolt is a good thing and when it is superfluous. Training by the various climbing clubs should include instruction on this subject. Perhaps a good rule of thumb for those who consider that a particular bolt is undesirable would be: "If you want to take it out while leading, do so."

But here the problem seemed far removed. It was simply a matter of whether we thought the climbing ahead would justify the expenditure of effort. We were optimistic, so out came the equipment. Of the various types available we favored a 3/8-inch twist-type masonry drill held in a steel handle. The hangers we were then using were of 1/8 x 1½ x 3½-inch aluminum, slightly bent in the middle and drilled with holes for a carabiner at one end and the anchor at the other. This anchor was a Star Dryvin, 1¼ inches in length. A two-foot section of rubber hose was used for dusting out the holes. This is but one of many types of expansion-bolt equipment now available and it is by no means accepted by all climbers who use bolts. The anchor itself is satisfactory for our purposes, but there are serious disadvantages to the widely-used hanger here described. A simple loop of bent strap-iron is probably superior. For our type of rock the twist-type drill is best and the star-type quite unsuitable.

So we went to work. After the first or second attempt most climbers will no longer try to drill a hole any higher than at ear-level. Of course, if a few inches will spell the difference between one bolt and two, a little stretch may be justified, but the effort in reaching the extra distance is disproportionate.

And on into the night. We quit soon after Don and Jerry had left, but were at it again early. One more bolt appeared necessary, and this must be a good one. In the sequence of the dozen bolts we had placed, most had been put only partway into the rock, in order to save time. Every third bolt would be fully and securely placed for reasons of safety. A solid anchor at the top of the ladder would provide security for any touchy climbing on pitons above.

No sooner had I mounted the ladder and started to work on the last bolt than our audience of last night returned. All I heard was an anguished, "Good grief, they're *still* at it!"

From the high bolt I traversed left, using friction of the rock and tension from the rope, to the lowest part of the overhang, and placed a couple of pitons. It wouldn't be easy; so I let Warren, always eager, take over. Here he elected to use double-rope technique of a type we find useful. This is not the method usually described, in which the leader snaps in with first one and then the other of the two ropes with which he has tied on. We seldom find this method advantageous, even on steep overhangs. Instead, we use the method Warren now employed. He climbed the bolt-ladder clipping in with one rope exclusively, the second hanging free till he reached the top bolt. The second rope was now run through a carabiner clipped into this anchor and then again neglected, all climbing being done on the first rope. Traversing left, he gained and passed my high point and then worked back to the right, climbing the overhang at a point almost directly above the bolts. By this time drag on the first rope was a considerable annoyance, so he untied and abandoned it. The second rope was running freely, protected by a substantial bolt, and ready for use. Warren clipped it into the best of his high pitons and went on with the lead. It was well that he was unhampered, for it was an additional seventy feet to the first stopping-place. A particularly creditable lead, this, for there was not a single further opportunity to place a piton above the overhang, and the climbing was done on hollow-sounding flakes stuck in some unknown manner to the solid granite a foot beneath.

Warren afterward confided that he'd been a little worried at the overhang. As he placed his last piton it opened the crack, and he could see the peg on which his weight was hanging start to sag. The answer? Clip a sling into the piton you're driving, and with each hammer blow transfer a little more weight from the lower piton to the higher. When I question him about the validity of his technique Warren responds with a broad grin.

"You can't argue with success," he says cheerfully.

By these efforts we had gained a unique reward. We had placed ourselves at the foot of a sequence of jam-type chimneys. Shades of the Lost Arrow! On and on till we reached a flimsy ledge roofed by a severe overhang. Now, with a certain amount of experience one can sense the hidden features in the rock of a given area. It is possible to tell just where the hidden handholds will be, which of two identical gullies will prove the better route, and so forth, all without recourse to any definable mental process. At this particular position we could all feel very strongly the presence of a square-cut ledge atop the overhang. How welcome it would be! For several long and strenuous pitches there had been no opportunity to sit down and relax. Our ropes were tangled and our equipment disorganized; it was a good time to start thinking of a bivouac site. So with a last burst of energy I braced across the chimney, took a boost from a wobbly piton and clambered over the edge. Nothing! We were wrong; there was no ledge. By our observations of the surrounding terrain we had judged ourselves to be close to the point at which the East Buttress falls back rapidly to the summit. But above me there was only the dramatic sweep of the walls rising another hundred feet. It would be tension climbing for the whole distance, and I felt entirely incapable of such an undertaking at the present time. Reluctantly, because of all the work invested, we turned back, promising each other and the rock that we would return on the first long weekend, Memorial Day.

John was unable to join us next spring and reap the reward of our efforts, but we were fortunate to have available Jack Davis. Jack confirmed our impressions of the climb. On first viewing the route upon which he had agreed to accompany us he merely said, "Oh!"

And then, in a slow, heartfelt tone, "I wish I had something to believe in!"

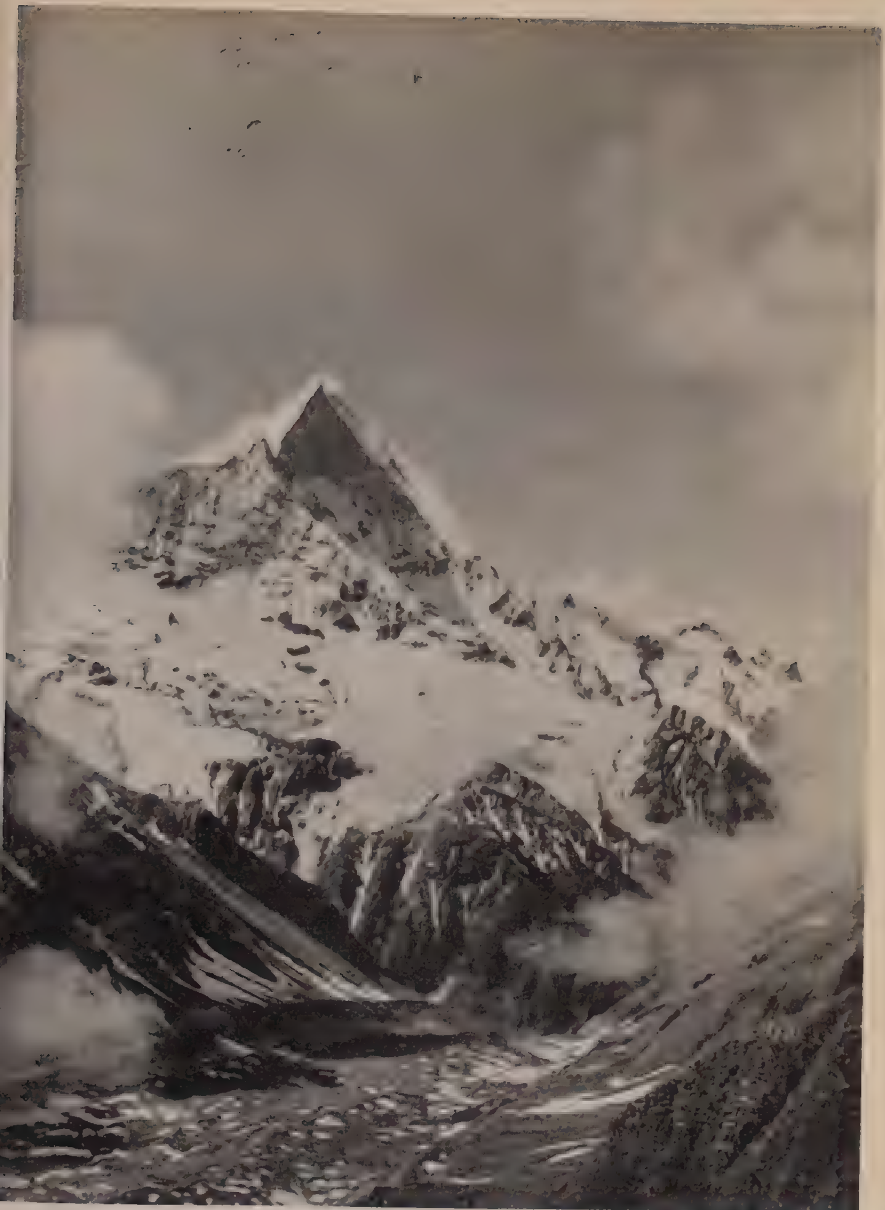
But we climbed hard and, after one false start, pushed the route to completion. Above the last tension lead it was only a short distance to the easy going.

The notoriety which tension climbing has gained despite its relatively limited practice is easily understood. Though perhaps not a major tool in the climbing of spectacular routes it is certainly a *sine qua non,* the extra something without which climbers would be forced to view the Lost Arrow, the North Face of Sentinel Rock and all the others from the same distance as do the thousands of tourists.

Also, as pointed out, many of our old favorite routes would be closed to all but the exceptional climbers were it not for a knowledge of tension techniques. And then, if something is to be done at all, why not do it well? Why not meet the five-foot overhang with facility and two direct-aid pitons rather than with a half-dozen closely placed pegs and spasms of awkwardness? The joy of Sixth Class, as of any other mode of climbing, lies in meeting the problem with a pure, simple answer. Such can be hoped for only when confidence and mastery of technique are in reserve. On his second tension lead a climber will run his rope through the carabiners in the proper direction. On the third his body weight will not be locking the carabiners he wants to open. On his fourth the distance between pitons will be noticeably increased. Proficiency has begun to show.

How difficult it is to realize, until tension climbing has been tried, that agility and coordination will still be more important than muscle-power or reach. Often and roundly I have cursed Allen Steck for the tension leads on which I have followed him. Though not nearly equal to my six-foot-three-inch height he has a maddening knack for leading with pitons separated by what I find a trying distance. Nimbleness rather than force!

In addition, there is a mechanical sense which can be satisfied by developing and collecting climbing hardware. On the one occasion when I carried a "skyhook" among my pitons I was no less than delighted to find it really could be used to circumvent the placing of a bolt. Driving a knife-blade piton into a hairline crack, or feeling the extra-wide-angle piton take hold in the seemingly made-to-order situation, can never replace the feel of cool, rough granite against the fingertips, nor should it be meant to. But for some it may provide an additional means of deriving pleasure from rock.



Wilfrid Noyce

MACHAPUCHARE FROM THE NORTHWEST

John Nicholls Booth

APPROACH TO MACHAPUCHARE, TWELVE MILES AWAY

LARGE AND SMALL GIANTS OF THE HIMALAYA

by WILFRID NOYCE

TIMES CHANGE. Seven years ago few would have dared to prophesy that by 1957 nine giants of over 26,000 feet would have been climbed. But there it is, and climbed they are, including the six highest. Fewer still, perhaps, would have foretold that the Mustagh Tower would succumb to two expeditions, or that Machapuchare, the fierce "Fish's Tail" of the Nepal Himalaya, would be climbed, as this summer it was to within 150 feet of its fishy top.

The big mountains, except Cho Oyu, have been assailed by big national expeditions. In all cases the technological advances made with equipment, down clothing, tent material and microcellular high-altitude boots have played their large part. On the very biggest giants rapidly improving oxygen apparatus has been of vital service. But man finds it difficult to live by bread, or even oxygen, alone. More important than all these is the so-called "psychological factor".

It is the same process as we have seen going on in the Alps. On top of Mont Blanc, where in the 18th century de Saussure's head ached, lungs panted and heart throbbed uncomfortably, thousands each year, having come up much faster, now sit peacefully sunbathing. They can do this because they know that others have been through the same strain of altitude, and greater, before. In rather the same way, on Nanga Parbat, Buhl was not necessarily a better climber than Welzenbach. But where Merkl and Welzenbach and Wieland struggled and died struggling in 1934, Buhl, on one miraculous day of 1953, climbed to the summit and came down the next to tell the tale. He knew what had been done and could therefore do better; and it will be a successor of his who reaches the top of Everest without oxygen. Each generation, psychologically as well as materially, climbs over the shoulders of those before. And we just happen to live in the lucky age when this upward process lands us on the tops of the highest mountains.

WILFRID NOYCE will be familiar to our readers as a member of the successful Mt. Everest Expedition and the author of that most readable account of it, *South Col*. Early last summer he served as part of the spearhead of a party which virtually climbed Machapuchare or "The Fish's Tail", a superb peak of almost 23,000 feet in the neighborhood of Annapurna. We owe the present article to our wide-ranging member John Nichols Booth, a climber and traveler who has, among other things, the distinction of being one of the last three Americans to enter Tibet, in 1948. While engaged in making a documentary film in Nepal, Mr. Booth met the members of the Machapuchare Expedition in Katmandu and was invited to accompany them on the week's march in to the base camp.

But my concern at the moment is more with the smaller peaks, those "slightly stunted giants", in Tilman's phrase, of 22,000 or 23,000 feet, which litter the highways of the Himalaya. Here the same evolution has taken place. Not long ago it was thought that above 21,000 feet one could do little more than put one foot in front of the other, on a fairly placid slope. This theory was already suspect in 1953, and was finally done to death by the Mustagh Tower story three years later. Here was a reputedly impossible peak climbed twice in about a fortnight by different routes. Of the British party only one member had previous Himalayan experience, and yet the climbing was of a very high order: on severe rock overlaid with treacherous snow. Another illusion had disappeared.

The advance here is in confidence and technique, apart again from the technological advances, this time mainly in light equipment and food. These men had developed a skill in the Alps and Britain founded on the experiments of generations; they then applied it to Himalayan rocks, confident in the knowledge of what had been done, there and elsewhere, before.

When we advanced on Machapuchare this year, it was in the humble certainty that none of us was a rock technician of the Joe Brown order. It turned out that we hardly set foot on rock, since our side of the mountain was composed of pure ice, with varying overlays of snow; and on steepish ice the technique is, as it were, more important than the technician. The pool of knowledge as to how to drive in ice-pitons, cut the right steps and fix ropes was sufficient to get ourselves and the Sherpa porters up places at which they confessed a much greater uneasiness than had assailed them on Everest or Kangchenjunga. At the one place impossible for them, a lowering operation of 350 feet, we were high enough for two of us to continue alone and carry the last camp.

We fixed altogether 2,000 feet of rope on the mountain, not as much, I think, as the Mustagh Tower parties. But apart from that and the camps, we were simply applying an Alpine technique on a larger scale and not worrying too much about altitude (since others had not before, and after all Machapuchare was only 22,958 feet). The one member of the party who had not previously been to the Himalaya celebrated his 44th birthday at Base Camp. He was going as well as, if not better than, anyone else. Thus we were fairly ordinary practitioners profiting by the skill and experience of thousands. Doubtless others will profit from ours (our experience, I mean) and proclaim Machapuchare the proverbial "easy day for a lady".

One point that I would make in all this is that an increased range of enjoyment is now possible. The big expedition will probably be used for a long time to come—for the traverse from the North to the South Col of Everest, for instance, whenever that is made. At the same time larger peaks will be thought possible for well-supported small parties. Already this year Charles Evans's two-man party, with four Sherpas, has attempted Annapurna II (26,091 ft.). Though they did not make it, they did succeed in doing the second ascent of Annapurna IV (24,688 ft.) along the ridge. In time even the biggest giants may be climbed by small parties; while on the lesser spikes it will increasingly be given to experts to discover "the narrow path that leads to Paradise". *Sic itur ad astra.* By the time the narrow path becomes broad, the mountains of the moon will be providing alternative attractions.

At the same time as technique makes greater things possible, political and other considerations do their best, in Asia, to see that the advance is not too rapid. The Karakoram, owing to the Kashmir dispute, are not easy to reach: two expeditions this year got in by the skin of their teeth, having had permission revoked up till the last moment. Garhwal, beyond the "Inner Line", is almost inaccessible, though said to be becoming easier. Sikkim is out of bounds. The Nepalese Government has, very justly, observed that its mountains have at last pecuniary possibilities and are not, as previously supposed, so many tracts of profitless land. A tariff for peaks is now fixed, Everest until this summer heading the list at 3,000 rupees (about £225 or $630). However, the Abominable Snowman has been found to have an even higher marketable value than Everest, so he goes for 5,000 rupees; and an unfortunate (or fortunate?) American expedition which wants next year both to climb Everest *and* catch a "yeti" is said to be charged the full 8,000!

There are some complications about this excellent system. If you do not get up your peak there is no rebate, and if you climb another peak, unmarked on the map, besides your intended, we learned this year that "you may climb it but not claim it". We were not dead sure what this meant, but we went ahead. We also accepted the expense of feeding, clothing and paying a Nepalese liaison officer from Katmandu, as well as a very complicated customs system, the fault of nothing but our bureaucratic heritage, between India and Nepal.

Perhaps because of all this complexity, there were only three climbing parties that I know of this year in Nepal; and that despite the kindness and genuine wish of the Government to encourage visitors. The goose that laid the golden eggs is showing himself unwilling to be killed. The result may be a turning away of not-very-rich visitors which will mean a slowing down of developments in these parts, not necessarily a bad thing if it leaves more for future generations.

Meanwhile many mountaineers are looking to the Andes and other great ranges for their adventure. This in itself is a positive good, in that "bigger" mountaineering had hitherto generally meant Himalayan mountaineering, and many fine areas have been wrongfully neglected. It is also good because, the more climbing widens, the more the spirit of competitive nationalism, almost inevitable on the highest peaks, is likely to fade away. As a force I think it was exaggerated in press and popular imagination anyway. But now that the great "national" peaks are climbed, and climbers are spreading comfortably over the lesser giants all over the world, fraternity is and should remain more than ever the watchword. In the words of an indignant Frenchman who found himself turned away from an Alpine hut full of Britons: "Messieurs, les montagnes sont pour tout le monde!"

UP THE MAGALLOWAY RIVER IN 1861

by MARSHALL M. TIDD

PART I

The original of this account, entitled Journal of a Visit to the Magalloway River and Parmachene Lake, Maine, September, 1861, *is owned by the Bangor Public Library, Bangor, Maine, and was called to the attention of* APPALACHIA *by L. Felix Ranlett, the Librarian. It is a manuscript of one hundred and four pages (9 1/3" x 7 3/8") written in ink in a beautiful copperplate hand, with ornamental initial letters on many of the pages, and embellished with many pen-and-ink drawings. There are also a folded map (9 5/8" x 19") and eighteen plates. The last of these contains portrait photographs of the members of the party mounted in an ornamental frame in ink. The other seventeen plates are drawings made in the course of the journey. Four of them are water-colors. The text, here published for the first time, has been edited, lightly, by Benton L. Hatch with generous assistance from Mr. Ranlett. In this first installment it was decided to limit the editorial effort to punctuation and a minimum of notes. No cuts have here been made, but the succeeding part will have to be cut, because of limits of space.*

Marshall M. Tidd was a lithographer in Boston, and may well have worked for J. H. Bufford's Sons, Lithographers. One of his drawings, at least, was included in C. A. J. Farrar's Illustrated Guide Book to Rangeley, Richardson, Kennebago, Umbagog and Parmachenee Lakes . . . *(Boston, Lee and Shepard, 1876), as well as his map, which was lithographed by Bufford's.*[1] *The plates accompanying this account and the line-drawings reproduced in it may well be the first extensive publication for pencil, pen-and-ink, and water-color work of Tidd. Even where versions of these drawings appear in Farrar's guides, signed or unsigned, many alterations will be apparent upon close examination. Whether the artist or the engraver was responsible for these changes is unknown.*

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[1] The map accompanied the first three editions of this guide and was attributed to him. Unfortunately it has not been possible to examine copies of the fourth edition (1879), or the fifth edition (1880), of the guide, consequently it can not be stated exactly when that attribution ceased. It was not present on the map accompanying the sixth edition (1881) or any thereafter. For the same reason, it has not been possible to place specifically the first appearance of material in later editions of the guide beyond that which appears in the first edition. The sixth edition of 1881 has been cited for that purpose, in default. The drawing forming the headpiece for page one of the manuscript appears as a chapter heading in Farrar's guide from the first edition of 1876.

This journey, from Bethel north, may be followed on the U.S.G.S. Bethel, Old Speck and Milan, Oquossoc, Errol and Dixville, Cupsuptic and Second Lake quadrangles insofar as modern topography allows. Aziscoos Lake now floods much of the route. Tidd's own map of the route will be published with the second and concluding installment of the narrative.

On the second day of
September 1861, our party of
nine assembled on board the

ON THE SECOND DAY OF SEPTEMBER 1861, our party of nine[2] assembled on board the good Steamer *Montreal,* Capt. Prince, and at seven o'clock P.M. left the wharf and glided swiftly down among the islands of Boston Bay on our annual pilgrimage to the backwoods of Maine. The night was still, clear and beautiful. The passage to Portland was one of the pleasantest that I ever enjoyed.

Tuesday [Sept.] 3rd. Three o'clock this morning found us alongside the wharf at Portland where we procured a wagon to transport our baggage to the depot of the Grand Trunk R.R. As there is no passenger train up the road until one o'clock P.M., we have made arrangements to go up on the freight train which leaves at five o'clock A.M. After loading up our baggage, we shouldered our guns and escorted it [the wagon] through the dark and deserted streets to the freightyard. Our teamster remarked that it was fortunate that it was not yet daylight, as the citizens, if they saw us, might mistake us for the advance guard of Jeff. Davis' army. (He had not seen the two beautiful American flags which were packed among our baggage.) We found the train standing in the yard all made up. It consisted of fifteen or twenty cars, mostly platforms; the last one an express car, covered, into which we loaded our freight and found plenty of chairs, stove, &c; shortly after, the conductor arrived, when we started off just as it began to be light enough to see.

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[2] The nine were James Lorin Chapin, Samuel Dolliver, William Kimball, Jack, John and Joseph Henry Parker, Leonard Thompson, Marshall M. Tidd, and Webb Wyman.

The morning was cloudy with appearance of rain, but the party were in good spirits and cared but little if it did. The conductor, like all R.R. conductors, is a merry fellow and accommodating. I think our party voted the freight train to be much pleasanter than a passenger train, as we had the whole car to ourselves with plenty to eat, and could promenade, sit, or lay down, just as we pleased. We sometimes amused ourselves with firing our guns out of the side doors at ducks and such game as we rode along. The train was light and we ran about twenty miles per hour (the average speed of passenger trains); at quarter past ten o'clock we arrived at Bethel (not Big Bethel).

We left the cars at this point and were obliged to wait half an hour for Lovejoy to get his teams ready to take us to Upton, during which time we were pretty thoroughly inspected by a party of loafers such as are always found about up-country railroad stations. I presume that the result of their inspection was satisfactory, as we were allowed to proceed without showing our passports. Bethel is a beautiful town, situated on both sides of the Androscoggin river. It contains twenty five hundred inhabitants. There is a very good academy here and the town is divided into twenty four school districts. There are three churches and an excellent hotel, the proprietor of which (Mr. Lovejoy) furnished us with two teams of two horses each to go to Upton. About half a mile after leaving the depot we descended the bank to the river and drove on board a scow which was attached to a rope stretched across the river, by means of which we were safely ferried across and landed in a gravel bank on the other side of the Androscoggin.[3]

We passed a number of very fine houses on the east side of the river, and from some of the elevations had a view of the beautiful interval along the valley of the Androscoggin on which are located some of the finest farms in the state of Maine. Eight miles from the ferry we crossed Bear River by a covered bridge and drew up at a little post office on the left in a corner of the road, by the side of a tavern which hangs out a sign of a villainous looking bear, with the words "Bear River House". After changing the mail we drove on and soon passed a little red school house. It being about the hour of noon the scholars were frolicing on the green in front of the house; many of them were lasses well along in their teens, whose bright eyes and rosy cheeks inspired me with the wish to be once again a school boy.

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[3] On December 18, 1867, at a town meeting known as the Bridge meeting, "it was voted that the town build a bridge across the Androscoggin River at or near Barker's Ferry . . ." *See* William B. Lapham, *History of Bethel* (Augusta, 1891), 673-4.

Eleven miles from Bethel we stopped at Poplar Tavern in the town of Newry, one of those institutions which occur at stated intervals on all stage roads in the country, to whose wide open stables the horses instinctively turn and where the passengers after a dusty ride are glad to stand once more upon their feet, upright. The house stands upon the right of the road, and on the left is a clear and beautiful stream running over the rocks and overhung with Alder bushes (positive indications of Trout, John [Parker] says, and he knows). Our fishermen have, with wonderful self-denial, withstood the temptations to fish thus far, but as we were obliged to remain here half an hour to bait the horses, they could not be expected to resist it any longer, so they seized their poles and in a twinkling were out of sight in the bushes after trout. I amused myself with making a sketch of the house. After getting harnessed again we drove on, picking up the fishermen along the road which followed the course of the stream.

Two miles from Poplar Tavern we stopped at an old saw mill which sits across a singular gap in the granite rocks known as "Screw Auger Falls", from the peculiar course of the fissure through which the water rushes down and has cut a spiral gorge through the rock about seventy five [!] feet in depth and not more than six or eight in width, until it terminates in a broad basin or eddy at the south end filled with water so clear that every pebble is as visible on the bottom as though there was no water there. I went through the mill and scrambled down over the rocks to the basin, where I made a sketch[4] and climbed up through the trees to the road again, where I found one of the teams had gone on and those in the other were out of patience with waiting for me, particularly the driver, who carries the mail and must "hurry up". I would here advise all who are fortunate enough to ride over this beautiful country to see before they start that there are no mail bags in the carriage, as they will certainly hear from them whenever they wish to look twice at anything on the way.

We have for several miles back had fine views occasionally of Saddleback and Speckled Mountains,[5] which loomed up higher and more grand as we were fast approaching them, until at last the road enters the gap formed by their almost perpendicular sides and is just wide enough for the road and the stream beside it. The scenery at this place is wild and grand beyond description. The

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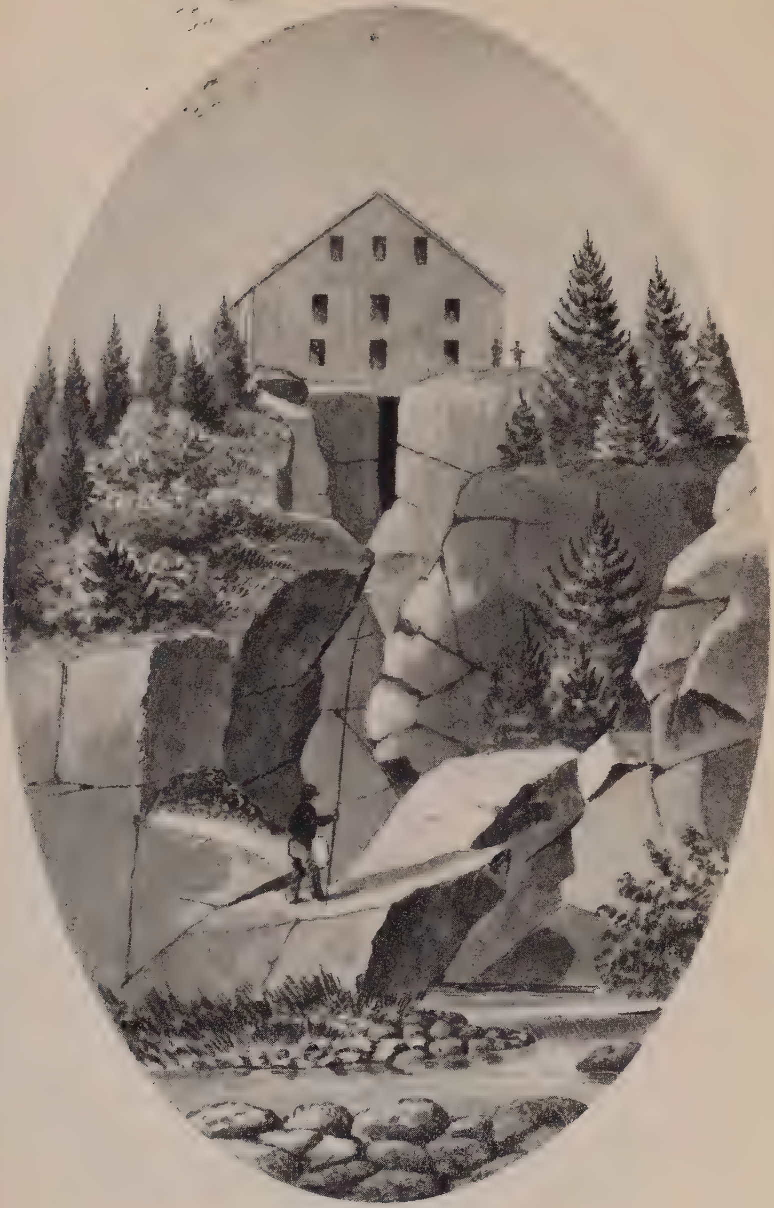
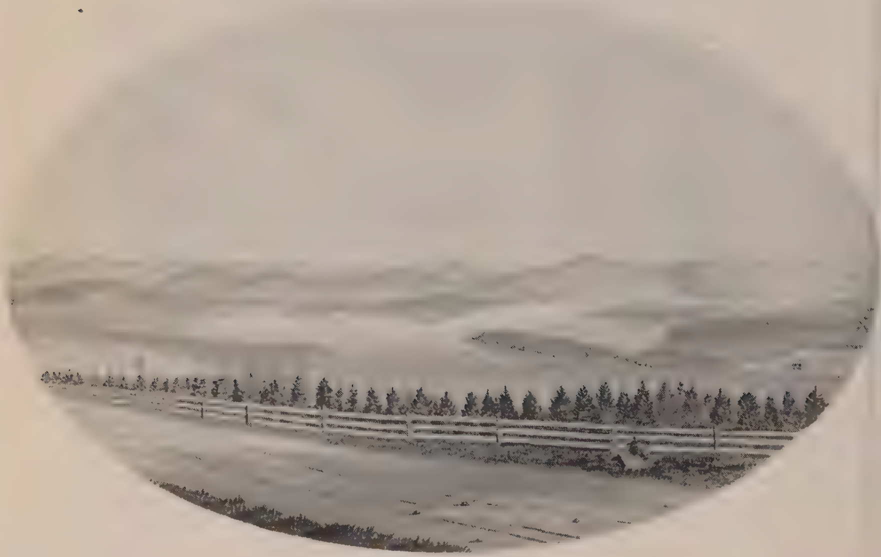
[4] In Farrar's guide, 6th edition (Boston, 1881), p. 30, there is an unsigned version of this drawing, although quite altered, either by Tidd or the engraver.

[5] Baldpate and Old Speck, respectively.



SCREW AUGUR FALLS
(From the Tidd MS., page 8)

POPLAR TAVERN, NEWRY, MAINE
(From the Tidd MS., page 5)



UMBAGOG LAKE, FROM B. HILL
(From the Tidd MS., page 23)

beautiful Rock Maple, the light pendant Birch, and the stiff pointed Fir lined both sides of the road, while, high above, the granite rocks in huge beetling cliffs overhung the whole, presenting a scene to which no pen or pencil can do justice. This place is called Bear River Notch[6] and can hardly be considered inferior in grandeur and beauty to the celebrated White Mountain Notch.[7] A few rods beyond the narrowest part of the pass we stopped a moment and looked back through the gap and down the valley of Bear River. The scene would have made a splendid sketch, but as the mail bag lies under the seat there was of course no time to spare, so we drove on again and in a few moments passed the water shed or the point where the stream changes and the water runs north to the waters of Umbagog Lake. We came in sight of the lake just at sunset, as we drew up at the little post office on the top of B. hill in the town of Upton. The view of the lake from this point was magnificent. Like a sea of gold it stretched its irregular form far away, winding around among the green and purple mountains, gilded by the setting sun until lost in the hazy distance, presenting a scene of beauty that once seen is not soon to be forgotten. After leaving the mail we drove down B. hill one mile and a half, at the foot of which we crossed Cambridge River by a bridge and drew up at a long low red house with a sign of a green bush growing out of a stump. We were welcomed to the house by the proprietor, Mr. Wm. Abbott,[8] who gave us a capital supper of Trout, and I must not forget to mention the Blueberries and cream, to which we did ample justice. Joe [Joseph Henry Parker] says, "it is a great institution."

Upton has been incorporated as a town about two years. It was formerly known as B. Plantation and is situated at the south end of Umbagog Lake, adjoining the New Hampshire line. Cambridge River runs through it and furnishes water power for a saw mill and grist mill which are owned and run by our host, Mr. Abbott. It has four school districts and a post office, and contains one hundred and seventy five inhabitants. There are two public houses here, Abbott's and Frost's, usually called the Lake House. The river, from Abbott's to the lake, is about fifty feet wide and winds its way through a low swamp or marsh without trees except a few dead ones along the bank of the river. This I presume is overflowed at high water when the gates are shut down at Errol.

Wednesday [Sept.] 4th. This morning was clear and pleasant. Had a good night's rest last night and was awakened this morning by William [Kimball] whispering to me from the other end of the hall to turn out after the trout and not to let anyone know it.

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[6] Now Grafton Notch.

[7] Now Crawford Notch.

[8] The Umbagog House was still being run by W. I. Abbott in 1882. See Farrar, edition of 1881, p. 33.

I found the fishermen were all off to the river after the first fish and I suspect some of them sat up all night in order to be the first out in the morning. Web [Webb Wyman] and I went down to the river and inspected the steamer *Union,* which lay just below the bridge. She is a flat scow with square ends, twenty five or thirty feet long and perhaps ten feet wide. She has a stern wheel driven by a small horizontal engine (high pressure), which is supplied with steam by an upright portable boiler. She is the pioneer steamer of these waters and is a curiosity in the way of naval architecture.[9] Leaving the steamer, we took a boat and pulled about a mile down the river and returned just in season for breakfast; after which we were engaged some time in arranging and loading our boats, of which we have two; they are in style about half way between a Swampscott Dory and a Batteau, and are about fifteen feet long, sharp at both ends.

At nine o'clock we got off and rowed a mile and a half down the river, when we entered the lake. We found the wind blowing quite hard. Our party, consisting of nine with our baggage, loaded the boats pretty well down, but we had a pleasant row up the lake until we passed in between a low rocky island and a point on the main land and landed on a sandy beach eight miles from Upton, where the water was full of gigantic frogs, the sight of which would have tempted a Frenchman's appetite. After a short stop and a lunch in company with a man who has accompanied us thus far in a birch canoe, we pulled on again up the beautiful lake surrounded by mountains whose lofty sides are covered with dense forest, from the water's edge up to their summits. The east side of this lake much resembles Moosehead lake, with the exception of the water; in Umbagog it is red and muddy, while that in Moosehead is as clear as the purest spring water. After turning a rocky point we soon came in sight of a long low grassy shore on the north side looking like a marsh, with a long belt of dead maple trees stretching across it to a low grassy point, at the extreme end of which we entered the Androscoggin River among the dead trees we had seen from the lake. At this place our friend in the canoe left us and paddled off up the lake. It was now one o'clock and we pulled along down the river a mile before the trees showed signs of life.

The land now became a little higher, about eight feet from the water, and perfectly level. The soil is a sandy clay and the banks are as even as though cut by hand. Occasionally we see a rock of granite, but seldom. The river is about one hundred feet wide and has but little current. Two miles from the entrance to the river we turned a sharp point to the right and entered the beautiful Magalloway. The water now became cold and clear as amber, the banks remaining the same, but the trees, which along the Androscoggin were a kind of Maple with shaggy bark and small sharply cut foliage much resembling Oak (there is no Oak here however), now changed and is now Fir, Spruce, Yellow and Canoe Birch, with occasionally tall White Pines and Larch. Four miles from the mouth of the Magalloway we stopped on the north bank, at Pine Hill Spring. While here, the steam scow *Union* came grinding down the river, making more noise than half a dozen saw mills.

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[9] A version of this drawing appears on p. 94 of Farrar, edition of 1881, but is not credited to Tidd.

After stopping a few moments we pushed on to Bottle Brook, two and a half miles, where we arrived at three P.M. Bottle Brook is a very small stream that enters the Magalloway from the west; it receives its name from the peculiar shape of a basin which it forms just before it enters the river, the plan of which is the shape of a bottle. The water of this stream is very cold and consequently it forms one of the haunts of those speckled finny fellows for which the Magalloway is so celebrated, and of course our fishermen could not get by without stopping. We caught seventy five splendid trout here in about an hour. It being then nearly night, we concluded to camp and spend the night here. We pitched our tent on the west bank of the river among the Spruce timber, about ten feet above the water.

While fishing here an incident occurred that convulsed the whole party with laughter. William and Leonard [Thompson] were in a boat a few feet off the shore fishing when Leonard hooked a large trout that gave his line a hard try, and William, who is an enthusiast in fishing, was afraid he would lose him, and in the act of seizing the fish he became so excited that he lost his balance and fell out backwards into the river. The ludicrous expression of his countenance, and the vigorous manner in which he struck out for the shore, created much merriment for the rest of the party, which vented itself in roars of laughter. Jack enjoyed it much but, unfortunately for him, a short time after he met with a similar mishap and fell out of another boat in which he was fishing, which somewhat compensated William for his misfortune. We had a capital supper of trout, and after making a large camp fire, turned in.

Our tent is thirteen feet long by about nine feet wide and eight feet high, with a fly over the top to make it more waterproof. Within its canvass walls we are as comfortable and contented as though at home. We cover the ground in the tent with the tips of Fir boughs, sticking their stems in the ground and thatching one layer over another like shingles for our bed, and an excellent one it makes, filling the tent with its delicious aroma. It is said by the hunters and lumbermen that persons sleeping upon these boughs never take colds. It is possible that the powerful aroma of the Balsam may have an effect to prevent it. We sleep in a row with our blankets wrapped around us and with our heads to one side of the tent, while our guns and baggage occupy the other side at our feet.

Thursday [Sept.] 5th. Slept soundly last night. At five o'clock this morning the thermometer stood at thirty five, and at ten A.M., it stood at sixty five. Just after daylight I took my gun and strolled down the river by a road which runs parallel with it, a few rods from the water, and leads from Errol, N.H., to Wilson's Mills, Me. I followed this road down about a mile to where it crosses Bear river at its junction with the Magalloway. There was a heavy bank of fog resting on the river, so that I could see nothing to fire at except a large blue Heron that rose lazily out of the top of the fog just as I came out on the bridge, but too far off to shoot. The trees were alive with Red Squirrels, who kept up an incessant chattering in all directions. I saw along this road many enormous White Pines, the largest I think that I ever saw. I returned to camp at six o'clock, just in season for breakfast, and found that the fishermen had improved the time while I was away; the result of their efforts being a pile of seventy five Trout, varying in weight from one half of a pound to two pounds, lying on the ground in front of the tent.

After breakfast Joe, Jack [Parker] and myself scrambled up on a hill about a mile north of the camp, where we had a fine view of the country around, with old Saddleback and Speckled Mountains in the south east, Asiscohos in the north, and Diamond Mt. in the north west. There were many other mountains in all directions whose names we did not know. Occasionally we could catch a glimpse of the beautiful Magalloway winding its way through the dark and heavy forest with which the whole country is covered. The only opening in the view is a little settlement under the north side of the hill (at home we should call it a mountain), of two or three houses. After prospecting to our satisfaction we returned to camp. On our way back we found three or four men with a yoke of oxen at work upon the road. At twelve o'clock we broke up camp, loaded our boats and started off up river.

The banks are now higher and the timber heavier, with many enormous Yellow Birches. The river is about one hundred and fifty feet wide, with the same clay banks, and very crooked. Sometimes we row a mile around and arrive within a few rods of the same place again. After rowing two miles we came to a large clearing in which were three houses. We landed at a spring on the east bank which our party have christened "Viola Spring" from the name of a little girl who lived close by and who, when they were here last year, treated them to a drink of its chrystal water, but we had not the pleasure of seeing her this time as the poor little child had lately died from that terrible disease, the Dip[h]theria, which is fast depopulating these settlements. We pulled on about a mile farther through the clearing and stopped at a little brook, where we landed on a beautiful grassy bank under the shade of a group of trees, on the farm of a Mr. West.

Here, last year, our party had made the acquaintance of some bright eyed little children belonging to Mr. West's family, of whom they bought berries and milk as they came down to the river to meet them. We had anticipated much pleasure in meeting again with our little friends, but not meeting them at the landing, Jack and I went up to the house about half a mile distant. Just before reaching it we came upon a little enclosure containing five new made graves. Arrived at the house, we met Mrs. West, who invited us in. Jack inquired for the children, when she informed us, with tears starting to her eyes, that they were all dead and were buried in the little enclosure we had noticed back of the house. She had lost five children and two grand children within the last six weeks by Diptheria, while she was just recovering from a severe attack of it and it was with much difficulty that she could talk. One of her neighbours has lost his wife and five children by the same terrible scourge. One can hardly imagine the sufferings of these poor people, so far removed from the blessings of society that are so common with us, and suffering from a contagious disease like this, where they are obliged to send forty miles to procure the services of a physician, or fifty miles if they would purchase any thing from a store; and besides they are so afraid of the disease that it is exceedingly difficult to get any assistance in taking care of the sick. We purchased some berries and milk of Mrs. West and returned to the boats with saddened hearts.

After taking a lunch on the grass, at three o'clock we pulled on again about a mile, when in a large bend of the river we discovered a flock of ducks. We landed part of our company with guns to cross over to the other side of the bend and intercept them, while the rest follow them up the river driving them, as we supposed, before us; but after pulling nearly a mile around we came back to within a few rods of the place where we landed our fellows and found them concealed in the bushes patiently waiting for a shot at the ducks, which had given us the slip. We picked them up and rowed on. The water was now quite shallow and swift. Soon after we grounded in the rapids, when [James Lorin] Chapin and I got out of our boat and John got out of the other and we walked up the east bank, part of the way by a road and the rest by a foot path, to the junction of the Diamond River, passing on the way one or two very good farms. We arrived at the Diamond River at sunset and were obliged to wait some time for our boats to come up, when they took us across and we landed on the west bank, on the New Hampshire line.

We pitched our tent on a smooth grass field on the point of land formed by the junction of the Diamond River with the Magalloway, on the second grant to Dartmouth College. There are two houses and a fine farm with fields of grain and potatoes here belonging to Mr. Franklin Durkee, who met us at the landing and welcomed us to the place. He supplied us with milk, potatoes, &c. Three members of his family are sick with Diptheria. From the camp we have a fine view of Asiscohos Mountain (pronounced "Escohos"), with its two round dome like summits towering high above all others in its vicinity. It is about four miles east from us, while immediately behind us on the west rises abruptly Diamond Mountain,[10] from one thousand to twelve hundred feet in height. It was late when we landed and the fishermen did not "try 'um". The weather to-day has been very fine and comfortable.

Friday [Sept.] 6th. When I awoke this morning I heard Web browsing around the fire making his tea. Web is great on tea. He says that he does not drink it because he likes it, but he takes it medicinally, I presume as an old toper does his rum to sustain his stomach, wherein lies his courage; or it may be that he has such an aversion to it that he considers it his duty to drink it all and get it annihilated as soon as possible. The grass was white with frost this morning. The fishermen "tried 'um" and took seventy seven Trout before breakfast. The morning was a little lowery, but cleared off pleasant about nine. I walked up the Diamond river about half a mile to an old saw mill in a gorge at the falls just under the side of Diamond Mountain, where there is a log dam. The mill sits over the river in just the position to present itself as a target to the logs that come down on the spring freshets, and last spring they made a complete wreck of it, but it is a beautiful place, where the clear silvery water comes tumbling down the mountain side, occasionally leaving deep holes or eddys between the rocks, where the trout love to sport. On the edge of one of these I found [Samuel] Dolliver sitting with his fishing pole, the perfect picture of contentment; after waiting awhile to see Sam catch trout, he and I returned to camp. I stood my gun up in the tent, loaded and capped, unfortunately with the hammers down on the caps, near where Jack had stood his. The wind shook the tent and Jack's gun fell over and hit the hammer of mine and discharged one barrel, making an ugly looking hole in the tent; in consequence of which we enacted a law that all caps shall be removed from the guns before they are brought into the tent.

At half past twelve we commenced breaking up camp and at one we went on up the river again. We are now among the mountains, and the scenery is magnificent. About half a mile out brought us under the mountain side, where the land rises from twelve to fifteen hundred feet high on the left bank and as steep as it is possible for trees to grow upon. Every turn in the river gives us a new view of the fantastic forms of their outlines. Two of these mountains, which nearly overhang the river, from their resemblance to the teeth of a saw we have christened the Saw Mountains.[11] Three miles brought us to rapids again, where some landed and the rest poled the boats a mile farther, when we came to a clearing at the lower end of a little settlement known as Wilson's Mills, or Lincoln Plantation; here we had some rough work to get the boats over some large rocks in the river over which the water rushes with great force. We were obliged to make use of tow lines to pull the boats from one rock to another until we succeeded in getting up into dead water at the head of the falls. Chapin and I took a walk up the settlement prospecting, while the rest remained at the head of the falls fishing until sunset, when they came up to a little brick yard on the land of Mr. E. B. Whittemore, who lives in a little farm house on the east bank of the river, about sixty rods from it, and under the north west side of Asiscohos Mountain. Here some diversity of opinion arose as to the best place to camp, but after looking up and down the river some time we finally landed at Whittemore's and pitched our tent among a thick growth of young Spruces near the road, within a few rods of Mr. W.'s house. Mr. Whittemore called on us shortly after we had camped and supplied us with milk, potatoes, and such things as we were in need of; he is an old friend of the party, some of them having stopped at his house when they were here last year.

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[10] Now Mt. Dustan.

This settlement of Wilson's Mills (the name of the post office), or Lincoln Plantation as it is sometimes called, receives its name from the oldest settler here, Capt. Wilson, who has a saw and grist mill here where he saws laths, clapboards, shingles &c. He is a native of the vicinity of Portland, and came here in 1825 at the time of the eastern land mania. He settled in what was then, and has been ever since, the frontier, his house being the most northerly one in the settlement, and there are no others between his and Megantic Lake in Canada. The settlement extends about eight miles along the river and contains sixty inhabitants who, like all the rest of the people in this part of the country, are suffering severely with Diptheria. They appear to be very hospitable and pleasant people. At sunrise this morning the thermometer stood at thirty four. The weather has been very fine and we have caught ninety two trout today.

Saturday [Sept.] 7th. The morning was somewhat cloudy but soon came off clear. The fishermen caught twenty seven trout before breakfast this morning. We arranged with Mr. Whittemore to go with us to the summit of the mountain today, that being part of our programme when we left home. About ten o'clock John, Jack, Leonard, William, Chapin and myself left the camp. We went up through the settlement and turned off from the road to the east, passing through the pastures; about two miles from camp we entered the forest and commenced the ascent of the mountain.[12] The path, if it can be called such, is made by spotting the trees (hewing small places on their trunks to guide travellers on their way), but even this was so obscure that it was with considerable difficulty that we could keep the trail. The distance from the commencement of the ascent to the summit is two miles, and much of it being very steep, so that the task of climbing it is by no means an easy one, particularly for William, who weighs something over two hundred pounds and who has a mania for burning Birch trees and thought we could enjoy the scene much better if we sat down a few moments while the flames went curling up their shaggy trunks.

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[11] Now called the Diamond Peaks.

After toiling up the steep path a while, the light suddenly came streaming through the thick forest and we soon came out above the trees over beautiful beds of thick green moss covering huge square masses of granite, of which this mountain is composed. Many of the blocks were as square and as straight as though split by art. The quality is rather coarse, and the color rather white. There were also large quantities of the little snow white Cranberries, which grow so plentifully in these northern latitudes among the moss. They were covered with fruit, just ripe, and of delicious flavor. Passing these we soon reached the easterly summit, which is the highest. The mountain is covered with forest, all but about one thousand acres of the summit, which has been burnt over and is one immense Blueberry field, except a few acres of the summit which is granite.

The view from the top amply repaid us for the labor of the ascent and is, I think, the finest I ever saw, not even excepting that seen from Mt. Washington. Standing on the extreme peak the eye takes in the whole horizon. Away in the south lies Umbagog Lake, a little farther east the Richardson Lake, over beyond and connecting with it is the Mooseluckmaguntick Lake with a large and densely wooded island in the centre. Still farther away is the Rangeley Lake, with its little town of the same name lying on the hill side beyond, and there were a number of others whose names I could not ascertain. In the south could be traced the course of the beautiful Magalloway, which sparkled in the

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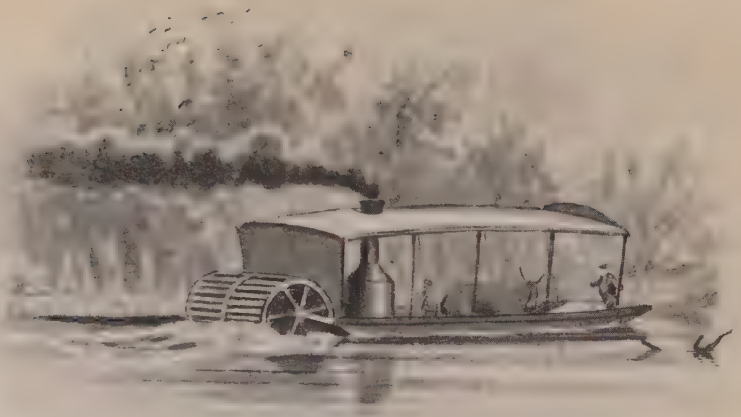
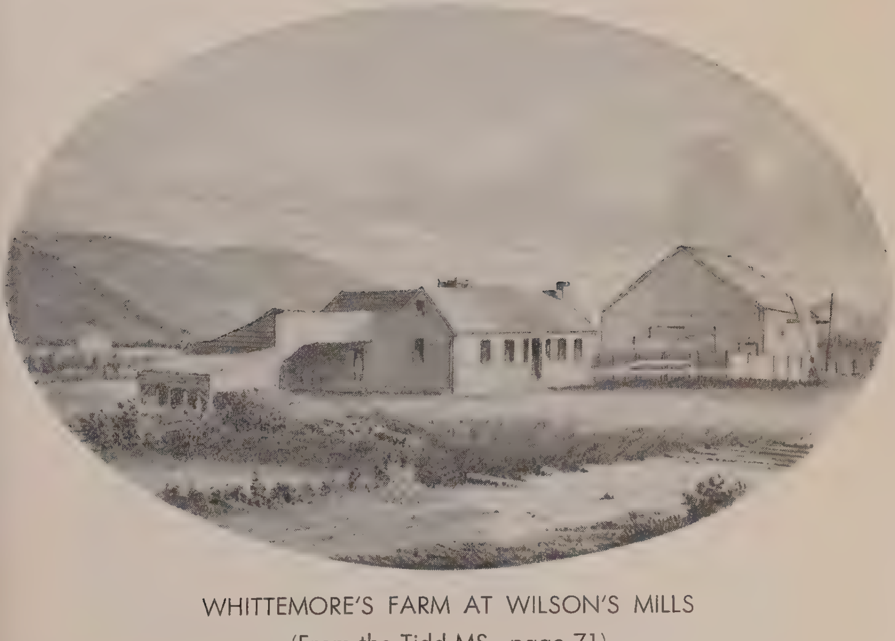
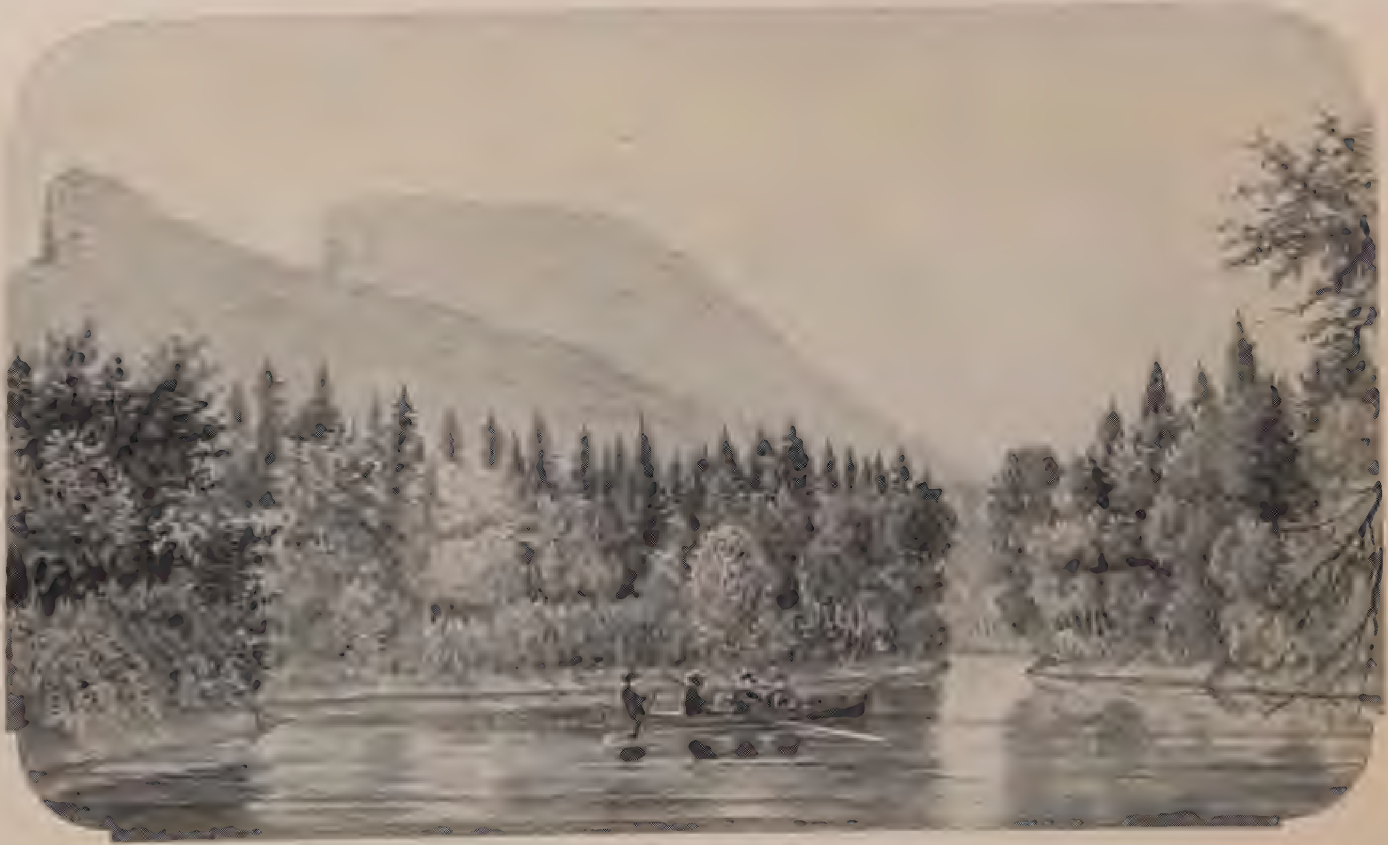
[12] In Farrar, edition of 1881, pp. 185-186, there is a considerably altered version of the account, beginning with this sentence and ending with that which concludes, "our excursion to the summit of Asiscohos." In the guide it is a quotation from "a private journal".



STEAMER "UNION", ON THE ANDROSCOGGIN RIVER
(From the Tidd MS., page 11)



WHITTEMORE'S FARM AT WILSON'S MILLS
(From the Tidd MS., page 71)



(From the Tidd MS., page 26)
SAW MOUNTAINS, now THE DIAMOND PEAKS

sunlight like a silver ribbon as it wound its circuitous course up through the forest clad country until lost to view under the mountain. Over it could be seen Mount Washington and the whole chain of the White mountains, towering up against the southern sky like a gigantic barrier between us and the country beyond them. In the east Mt. Katahdin lifted his lofty peak far away in the blue distance, the noble rival of Mt. Washington and but five hundred feet lower. Between us and that could be seen the great basin of Moosehead Lake, but not low enough to see the water. From this point around to the north and west is one vast forest extending as far as the eye can reach, the whole horizon being bounded by mountains.

The Blueberries are just in their prime and we feasted upon them until we could eat no longer. They were of very large size and the ground was blue with them. I had the curiosity to measure one of them and found it to measure one inch and three fourths in circumference, and I counted twenty seven large and fully ripe berries in one cluster.

The wind was very strong on the summit, and cold. We built a large fire in order to keep comfortable. William (contrary to our advice) came up here without any coat, and if he gets off without a severe cold he will be extremely fortunate. I made a sketch looking south but my fingers were so cold and stiff that I had much difficulty in doing it. We remained on the summit about an hour, during which time Leonard and Whittemore went down the east side some distance to a bear trap, but came back without any bear. Soon after we returned to camp, where we arrived at five o'clock, much pleased with our excursion to the summit of Asiscohos.

Sunday [Sept.] 8th. Last night was very cold and this morning the grass was frozen stiff. At five o'clock this morning the thermometer stood at thirty two. We kept warm and comfortable, however, in our tent. I busied myself this morning in writing letters home and in sewing up some shocking rents in my clothes. We are a pretty rough looking set of fellows now, and our faces are well browned. Some of our fellows have shaved today. We changed our bill of fare today by dispensing with trout and indulged in a mess of stewed beans.

In the afternoon Leonard, Chapin and myself took a walk up to the mills; they are not establishments such as are called mills in Lowell and Lawrence, but a kind of rough sheds with machinery for sawing clapboards, shingles, laths and such lumber. In one corner of one of them is a grist mill. There is a log dam here and a fall of about ten or twelve feet immediately at the mills, just below which is a bridge over which the road crosses, immediately after which it branches off to two or three houses and disappears altogether into the fields and woods, and is consequently the head of carriage navigation in this direction at least. Back of the houses [is] an abrupt granite ledge, which we scrambled up and obtained a fine view of the valley of the Magalloway, with the mountains on either side and far off in the blue distance the White Mountains looking like clouds on the southern horizon. I made a sketch of this scene[13] while Chapin took a nap on the soft side of a granite rock and Leonard reconnoitered with a spy glass.

Returning, we passed the house of Capt. Wilson, in the rear of which we saw an old fashioned kitchen garden; and it is the best garden I have seen since leaving Massachusetts. It contained Beets, Turnips of two kinds, Carrots, Cabbages, Parsnips, Potatoes, Sage, Caraway, Cumphrey, Alecompane, Corn, Currants, Goosberries, High Bush Cranberries, Roses, Sunflowers, Coxcomb Poppas, Hollyhocks, Lilacs, Peas, Beans, &c. They raise no Squashes at all here. I like the people here very much; they call at our camp and are very sociable. This evening Capt. Wilson called to get a little brandy for his three children, who are sick with Diptheria. We gave him some from our medicine chest, which he wished to pay for, but we declined to receive it and in the evening he sent us nine lumps of new butter and an offer of as many vegetables as we wished from his garden.

Monday [Sept.] 9th. The grass was frozen hard this morning and the stopper was frozen into the milk can just outside the tent. The camp fire is decidedly comfortable. We burned an extra pile of old stumps &c. which we are obliged to bring some distance upon our shoulders. The falls at this place being one of the places that the fishermen propose to pay particular attention to, we shall remain here today in order to give them a chance to "try 'um". The falls are a series of rapids where the water tumbles down over rough rocks for the distance of three miles, leaving many eddies and pools which are famous places for trout. William and I remain to keep camp while the rest are all away to the falls fishing. William took a bad cold when he went up the mountain on Saturday and now he has the rheumatism so bad that he can with difficulty get about. Keeping camp is rather dull business, but I amused myself with writing letters home and shooting Red Squirrels that came barking around the camp.

The mail leaves here once a week for the rest of the world, and tomorrow being mail day will be the last time we can send for a week. This is town meeting day in the settlement and the legal voters assembled in the village school house and exercised their right of suffrage. There was quite a full vote polled for state officers and for their local authorities, which consist of a board of three Assessors. The whole number of votes cast was ten, nine union men and one traitor.

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[13] No copy of this appears in the manuscript.

About three o'clock the fishermen began to come in with their fares. They did very well, as when they had all arrived we counted up two hundred and seventy three Trout. It was something of a job to split them, but they have become experts at it now. We have our provisions, bread, &c., packed in tin cracker cans, which as fast as we use out their contents we fill with split and salted trout to take home with us.

We have made arrangements with Mr. Enoch B. Whittemore to go with us to Parmachene Lake as a guide, and as the river is shallow in many places between here and Parmachene Lake, we leave our Umbagog boats here and have hired two lighter ones above the falls and had one of the same ones sent through to the lake for our use when we get there, in order to save the labor of carrying by the falls of the Little Magalloway. We have been here now three days and I am getting tired of staying so long in one place, and shall be glad when tomorrow comes so that we can be off. The day has been very pleasant. Although the nights are cold and frosty the days are warm, the thermometer sometimes getting up to eighty at noon. I think that in course of a week thc effect of the frosts will be visible in gorgeous colors in the forest here, in which there are large quantities of Rock Maple & Birch.

(To be concluded)

Our Umbagog Boats

LAND-USE PLANNING FOR THE W.M.N.F.

by Gerald S. Wheeler

Forest Supervisor, White Mountain National Forest

Management of the White Mountain National Forest under the multiple-use principle has been carried on since the Forest was established. Frequently complete adherence to this principle has been difficult and, with the growing complexity of the problems being confronted, the Forest Service has been working for some time on a plan which, it is hoped, will provide better direction in administering this large public property.

Large forest ownerships are not uncommon here in the Northeast, but most of them are substantially single-purpose areas, usually for timber production. The State-owned Adirondacks in New York are devoted to recreation, with timber cutting as we know it excluded by law. But here in the White Mountains we have a large public forest property firmly dedicated to serving several needs—water, recreation, timber, wildlife and possibly minerals, with a large and steadily increasing number of people and dollars involved in each of these fields.

That is all to the good and in substantial accord with the views of the folks who in the first place pushed up the idea of public forest areas in the East. Inevitably, however, some of these increasing demands or uses encroach on each other and compete for dominance of the same area, often of the same acre. In theory it would seem simple enough to say that a particular area shall be used to grow timber, another to produce water and a third for recreation. To some degree fairly large areas can be sorted out in that way, as least as far as their adaptability for a given dominant use is concerned, but for much of the Forest it is a case of local adjustment, limitations and reconciliation.

The background for such a plan is given in this article. It is, for the most part, the work of former Forest Supervisor C. L. Graham.

General Description of the Area

The White Mountain National Forest includes some 720,000 acres of federally-owned land in New Hampshire and Maine. It takes in the main mountain-mass south and west of the Androscoggin River, and south of the Upper Ammonoosuc. It makes up about 12 percent of the land area of New Hampshire and a nominal part of Maine. It includes the headwaters of the Saco and Merrimack Rivers, as well as parts or the whole of important tributaries of the Connecticut and Androscoggin. The bare purchase price of the land and timber up to June, 1951, stands at $5,489,325. With addition to this of the considerable costs of purchasing, such as title clearance and subsequent surveys, plus expenditures for structures, roads and other facilities, but not including operating expense, the capital investment would run in the neighborhood of $10,000,000. In terms of today's dollars that figure would probably be doubled if not tripled.

The topography of this area has been carved from a tremendous, thick mass of crumpled rocks. Of the periods of geologic history through which the area has passed the one of most immediate concern is the latest, in which has occurred slow sculpturing by streams and glaciers, frost work, surface erosion and wind. This weathering has resulted in high peaks, deep valleys, ravines and notches leading to a rather definite zoning of the surface area in the mountains. These zones appear to be fundamental in land-use planning. They consist of (1) the *upper slopes,* approximately 220,000 acres, generally above 2,000 to 3,000 feet in elevation, where the soil has little depth; (2) the *lower slopes,* approximately 100,000 acres, where the soil is deep, well drained, and usually quite rocky; and (3) the *lowland country,* approximately 400,000 acres, with the best and deepest soils.

The *upper slopes* zone includes sub-alpine barren lands and considerable quantities of the high spruce country. Mechanical erosion, resulting from quick run-off and accompanying debris avalanches, tends to keep any appreciable depth of soil from accumulating. Quite a large part of this zone has been logged in the past but because of low productivity, inaccessibility, or both, it is not considered commercially important in present timber-management plans. Except for occasional road crossings such as the Jefferson Notch road, or special developments such as those on Mt. Washington, the region is used chiefly for high-country climbing, with occasional overnight shelters.

The *lower slopes* zone, while including those parts of the spruce slopes which can be considered suitable for commercial forest management, is more generally characterized by hardwood and mixed hardwood-softwood stands. It is a zone built up of well-weathered talus. The water-table is some distance below ground except where it comes to the surface in small swamps. While this zone is of considerable importance in timber-management plans, it also has high scenic and other values.

The *lowland* zone, which includes the valley bottoms, has deep beds of gravel and till washed down by glacial action and a heavy run-off. The water-table here is frequently close to the surface. This region has the best soils, produces most of the water, grows the most, best and most accessible timber, produces and carries most of the game and fur-bearing animals, includes most of the productive and usable fishing waters and, by reason of its proximity to roads and trails, carries much of the mass recreation, including hunting and fishing.

The climate of the White Mountain National Forest area is a modified continental type with long, cold winters accompanied by heavy snowfall, and comparatively short, cool summers. Average annual temperature is around 40° F., with an absolute minimum between −35° F. and −45° F., and an absolute maximum between 95° F. and 100° F.

The economy of the area is based largely upon the logging, lumbering and wood-utilization industries, and on recreation, with farming running a poor third. Few farms in this area of poor, rocky soils are self-sufficient. Most farmers supplement their farming incomes by spending a portion of their time in the woods or by catering to the many thousands of visitors. Within the zone of influence of the National Forest there are consumed annually something like 400 million board feet of raw material, with a large segment of the resident population employed in its harvesting and processing. In 1952 the valuation of private recreational property represented only 9.4 percent of the total private-property valuation for the State of New Hampshire as a whole. However, in the Mt. Washington, Pinkham Notch and Crawford Notch areas in the heart of the White Mountains, this valuation represented 40 percent of the total private-property valuation. For the whole White Mountain National Forest and surrounding area, then, the private recreational property valuation represents a proportion of the total private-property valuation which is somewhere, perhaps halfway, between these figures, and this indicates a substantial investment in the recreation business.

RESOURCES INVOLVED AND THEIR PRESENT USES

Water

The White Mountain area is favored with an annual precipitation of between 40 and 50 inches, fairly well distributed throughout the year. However, with one-fourth to one-third of this in the form of snow, stream flow is not uniform. The result is that at times the area suffers from an excess of water with resulting flood damage, while at other periods water is deficient in relation to demand. An illustration of this situation is taken from the records of the U. S. Geological Survey gauge at Woodstock, New Hampshire. From 1940 to 1950 only 3.6 percent of the yearly flow of the Pemigewasset River occurred in August, while 24.6 percent ran off in May. Yet average precipitation in that section is slightly greater in August than in May.

While there are many streams, both large and small, in the area, there are but few ponds and lakes. These, for the most part, are small, deep, cold-water ponds, although there are also a number of small, shallow ponds which are gradually filling in.

The swift, steep-gradient streams create problems of water quality as well as of water quantity. At times of excess water, erosion, landsliding, and streambank cutting are greatest, and bedload and sedimentation become much more important factors. When stream flow is low, pollution is accentuated because there is less water to dilute existing pollutants. Little pollution exists in the streams as they leave the National Forest, but sewage and industrial wastes become heavy in these waters before they leave the region as a whole.

As yet little is known about the subsurface waters of this area. Some communities have augmented their surface supplies of domestic water by tapping underground sources, and have found them to be relatively free from objectionable minerals.

Even though it is more or less taken for granted, water is pretty certainly the most important product of the area. An appreciable part of the stream flow supplying domestic, industrial and irrigation water for heavily populated New England comes from the White Mountains. The investment figures for the known municipal and community domestic-water developments, within the area only, are approximately $3.5 million. Use of this water runs to better than two billion gallons per year, with a value, based on capital investment alone, of 7½ cents per 100 cubic feet or .01 cent per gallon. Watersheds for these developments cover some 100,000 acres of National Forest, plus another 38,000 acres of intermingled, privately-owned land. In addition to the water used through central supplies, there is widespread individual development and use. Although there is heavy use of the water for industrial purposes at some distance from the area, the rather tremendous water resources of the mountains are largely undeveloped.

Everything points toward a continued growth in the use of water rising in this area. Increasing populations, greater per capita use, and a growing awareness of the value of pure water are creating greater demands. During the past decade at least three communities—North Conway, Conway and Gorham—have sought additional domestic supplies and have eventually turned to wells for them. Other communities—among them Lancaster and Groveton—have become dissatisfied with the intermittent turbidity in their surface supplies and are demanding clearer water and more even flows. As these demands continue, pressures increase for the exclusive use of watersheds as water producers, with human occupancy or intensive use of the watersheds for other purposes being frowned upon.

In the past some pollution was expected while turbidity, when it occurred, was something that had to be lived with. Now chemical treatment to lessen pollution dangers is growing, and cloudy, silt-laden water at the faucets is the arch enemy. Land managers are expected to cope successfully with this problem and nothing less than completely clean, pure water is accepted.

Furthermore, the demand for greater opportunities for recreational use of water in the area is growing rapidly. And also it is not unlikely that before long industries requiring clear water will be taking advantage of opportunities for development on the fringe of the National Forest.

Recreation

There are certain characteristics whose drawing power makes the White Mountains the most heavily used recreation area of comparable size in New England. These are: 1) combined mass and elevation; 2) wilderness character (of parts); 3) alpine character (of parts); 4) intense trail system; 5) proximity to heavily populated areas.

From a recreational viewpoint the combination of mass and elevation probably constitutes the major appeal of the White Mountains, which comprise the largest area of this character east of the Rockies. Elevation alone, without accompanying mass, seems to lack the attraction that the combination affords.

The wilderness nature of the White Mountains is comparable to that of northern Maine and the Adirondacks of New York. The value of this character as a recreational attraction has been the subject of much controversy. However, areas in the Appalachians fairly similar to the White Mountains in geology have only limited attraction other than scenery primarily because they are too accessible.

A factor closely correlated with elevation is the treeless mountaintop area which makes up some 6,200 acres in the White Mountains. The mere existence of these alpine areas appears to be a tremendous attraction. They add impressiveness from a scenic viewpoint and offer a challenge to the vigorous climber. Their flora and fauna are unique and the subject of much professional and amateur study.

Closely allied to the factors of wilderness and alpine areas is the rather tremendous White Mountain trail system, which is without doubt the most complete system of the sort available for recreational use in the East and probably in the entire United States. Some 1,200 miles of foot-trails make up the White Mountain system.

The proximity of the area to the intensely populated sections of New England and the Northeast, within a day's drive of one-fourth of the population of the whole country, offers unlimited opportunities also for non-active recreation for those who merely want to rest and enjoy the scenery.

Recreational facilities now in existence or being built in the region include: 11 camping and picnicking areas; 7 picnicking and scenic or bathing areas; 30 open-front lean-tos and 9 cabins on trails away from roads; 12 miles of ski trails and 2 open ski slopes which are not closely supervised; a popular high-country natural ski area; and one of the largest winter-sports developments in the East.

To quote from the White Mountain National Forest C.Y. 1956 *Annual Statistical Report on Recreation Visits:*

Recreation Areas	*Total Visits*	*Total Man-Days*
1. Campgrounds	51,000	137,000
2. Picnic Areas	167,000	64,000
3. Winter Sports Areas	89,000	87,000
4. F.S. Organization Camps	200	400
5a. F.S. Hotels or Resorts	350	250
5b. Other Hotels or Resorts	45,000	33,000
6. Other Forest Areas	773,000	704,000
7. Roads and Water Routes	5,440,000	5,340,000
8. Sub-total (1, 2, 3)	307,000	288,000
9. Sub-total (1-6 incl.)	1,125,550	1,025,650
10. Grand total (1-7 incl.)	6,565,550	6,365,650

Figures furnished a few years ago by the N.H. State Planning and Development Commission indicated that, at that time, the gross recreation "take" for the White Mountain area ran to about $53,000,000 yearly or better than 40 percent of the recreation income of the State of New Hampshire as a whole, and that figure is constantly climbing. Recreational use is increasing at a steady rate in the national forests throughout the country and is expected to do so here. In developing estimates for Operation Outdoors an increase rate of 5.4 percent per year for the eastern region was used, and it is assumed that this rate of increase will hold in the White Mountains.

Since World War II there has been a greater increase in backcountry camping than before, and this is expected to continue. Trailer camping, which has been slow to gain popularity in the East, is booming elsewhere and predictions are that before long this mode of camping will begin to replace tent camping. This change will require the provision of different facilities in the campgrounds from those which now exist. Another facility now greatly in demand is the wayside area or rest stop for sightseeing tourists.

Increasing demands for winter sports areas are expected to continue. It is hoped that a study of this phase of recreation will be made shortly, to furnish reliable estimates of future uses and demands.

Timber

The area was cut over for softwoods during the late 1890's and the early 1900's, leaving overmature hardwood stands. Management plans divide the Forest into 503,000 acres of commercial forest land and 219,000 acres of non-commercial. Present merchantable acreage is estimated at 204,000 acres containing approximately 1,600 million board feet of growing stock of all sizes and species. Estimated annual growth for the area averages 100 board feet per acre.

With existing wood-using industries in the area consuming around 400 million board feet a year, source of materials is an increasing concern for most of them. Quality timber for veneer and lumber is becoming scarcer, increasing the pressures on it. It is expected that demand will readily take up the present allowable annual cut on the National Forest of eleven million board feet of sawlogs. Softwood pulpwood is in good demand and expected to remain so, but as yet the supply of hardwood pulpwood is such that the large quantity of this material, an annual cut of twelve million board feet, available in the area cannot be moved as rapidly as desirable under existing economic conditions. It is not expected that a much more rapid movement of this product will come about within this ten-year planning period. Temporary slumps in the market may interrupt at intervals the orderly cutting of the various amounts mentioned, but over the planning period the average should be sustained.

Wildlife

This resource is largely confined to the lower elevations in the mountainous areas of the Forest. It has remained fairly constant and it is doubtful whether additional management practices will substantially increase game populations. However, with hunting in the area concentrated in the lowlands and lower-slope zones, within a mile of roads and trails, the first weekends of the deer season find hunting pressures high there.

The mountain streams as a rule are poor fish-producers because of scouring and food deficiencies. Low water-temperatures also play an important part in holding down fish populations and sizes. Some of the ponds afford fair fishing at times but, with slow fish growth, cannot be said to furnish good sport. The scenic background of these clear mountain streams and ponds make them extremely inviting to fishermen despite small catches, and so they are heavily over-fished.

Minerals

While the area has been a favorite hunting ground among amateur gem collectors for many years, practically no commercial deposits of minerals have been found here to date. Rather intensive prospecting is now going on, with geologists and mining interests apparently convinced that valued deposits of certain strategic minerals exist.

SKYLINE SKETCHES

From time to time we publish under the above heading various short accounts of interesting episodes in the mountains. We hope that our readers will send in suitable contributions.

THE INQUISITIVE BEAR

by ROBERT McCONNELL HATCH

CLOSE BY WE HEARD THE INSISTENT SINGING of a northern water-thrush. It rang through the swamp and startled us with its emphatic jubilance. It was answered by another, far back, the song remote but still dominant, ringing through the alders above the gentler music of veeries, Canada warblers and white-throated sparrows.

We had just left our car, hoisted our packs onto our shoulders, and started a day's trek into the wilderness at the northernmost tip of New Hampshire. No bird is more characteristic of that country or captures more vividly the heart-beat of spruce bogs and muddy mountain ponds than the northern water-thrush. Hearing it sent a tingle through us. It announced that we were truly in the wilderness.

As Jack and I pushed our way through high ferns that choked the trail we talked about other trips we had made and the wild-life we had seen. We mentioned some of the deer we had watched, a wildcat that Jack surprised one winter evening in a dusk-filled glen, and a fisher that came within a few yards of me on a lonely mountain north of the Presidentials. These animals had a large place in our memories and were the subject of many a conversation when we were far from the woods and mountains. However, we harbored one deep regret. We had never seen a bear when we were together in the woods.

I had seen bears at various times when I was walking alone, and Jack had glimpsed a few on hunting trips in Maine. They were small or medium-sized and we were fortunate to have seen them, but we wanted most of all to meet a bear when we were embarked on a camping trip together. We treasure most the memories we share. It is in shared memories that friendships are rooted, so that long afterward the friendship is enriched by a passing reference to something we saw together. Perhaps this would be the day, we thought. Perhaps on this bright day in spring the bear would cross our path.

The trail left the bog country and followed a stream up a mountain. Olive-backed thrushes sang in the yellow birches that bordered the brook. Sometimes their song alternated with the melodies of a hermit thrush or the lonely, haunting notes of a white-throated sparrow.

Bushes and trees were alive with warblers—black-throated greens and blues, Canadas, black-and-whites, oven birds, blackburnians. In stands of spruce we heard the weeta-weeta-weetee of the magnolia warbler. An opening in the woods rang with the "witchery" song of a Maryland yellow-throat. Most abundant of all were the redstarts, flashing through treetops like fire-lit butterflies, bringing to these austere northern forests the life and brilliance of the tropics. It was a day of bird song and sunshine and hillsides still pale with new leaves.

Two miles up the mountain we left the trail and followed the stream's west branch through boulders and thick fern. At times the water was only a thin trickle, barely visible as it worked its way down the mountain. Our destination was a spruce-bordered pond and, looming above it, a peak that overlooked all the wilderness that lay behind us. The way was steep, and we were ascending rapidly. The leaves grew paler and smaller until they diminished to newly opened buds. Spring, so luxuriant in the world below us, had barely reached these heights.

Here we saw and heard the first blackpoll warblers, dwellers in the high places where even in midsummer the night air is sharp with frost. The song of the blackpolls rose poignantly to its crescendo, then softly ebbed away, embodying the loneliness of the heights.

We paused to adjust our packs. We were close to the pond now. As we looked ahead a black form turned from the brook and moved through a screen of low spruce. A branch cracked. The screen of spruce parted. Crossing in front of us was a bear, bigger by far than any we had seen before. In a fraction of time we saw his brown muzzle, his immense form that looked like a jet-black shadow in the dark spruces. Then he was gone.

We stopped and listened for his retreating steps, but we heard nothing. We assumed that he had fled, but the crack of another branch told us we were wrong. He was returning to the scene of his encounter.

This time he came into full view, disdaining the use of cover. Deliberately he advanced toward us, the distance narrowing until he was only twenty yards from where we stood. There he stopped and appraised us. We did not move, and we could all but watch him relax inside and give way to an overpowering curiosity. He moved his great head back and forth, sniffing the air. Then he settled on his haunches and stared. His whole body spread out, and he looked like a huge black pyramid. From time to time he moved his tongue over his lips. We continued to remain motionless and stare back at him as he stared incredulously at us. Minutes passed. Then suddenly, without warning, he seemed to tire and looked away. It was a signal that he had had enough. With immense deliberation he rose, turned his back on us, and slowly lumbered off toward the pond.

We did not see the bear again. He had become part of our store of memories, and we would talk of him on countless occasions during the years to come. When we reached the pond we sat down beside an old beaver dam and listened to the blackpolls. We were profoundly thankful for our view of the bear. Even in reminiscence we could feel the throb of those tense moments when we gazed at him across a few yards of open ground in the heart of the forest. To have shot him during those unguarded moments would have been a sacrilege. We had been granted the rare privilege of watching a bear when his age-old fear of man was not aroused and he accepted us as inscrutable invaders of his domain.

We were thankful, too, that there still exist in this country remnants of wilderness where bear can roam without the unremitting threat of man's destructiveness. We prayed that there would always be such wilderness, so that even a hundred years from now two friends could set forth together with high hopes of seeing a bear.

A DAY ON THE MIDDLE FORK

by THOMAS J. GLENNON

I AM PROPPED UP AGAINST THE TRUNK of a huge fallen pine tree, on a sandbar in the Middle Fork of Idaho's Salmon River. The sun beats down from a deep blue sky, concentrating its noonday heat in the canyon through which the stream flows. The walls of the narrow gorge rise steeply to a height of several hundred feet, the slopes covered moderately with stands of ponderosa pine, brown-trunked and roughly beautiful against the dull gray of undergrowth and rock. The water is rushing past at eight miles an hour, its surface relatively calm after the stretch of tumbling rapids through which we have just come.

The fire still smoulders on the spit of sand, and a folding table, loaded with food and utensils, stands close beside. We have already been served our first lunch on the river, consisting chiefly of newly caught trout. The two guides are busy scouring pots and pans and storing them in the depths of two rubber rafts which lie on the shore. Some of my companions are resting in the shade, some have returned to their fishing, while a few are moving about with their cameras, recording on film the beauty of the unusual scene.

Before stopping for lunch we had been on the river for a couple of hours, four men in each of two peculiar floats, specially designed by our guide Don Smith, one of the pioneers of travel on the Middle Fork of the Salmon. Don has attached huge sweeps, ten feet in length, to bow and stern of a ten-man navy raft. To the rim of the raft he has fastened a metal frame supporting a canvas bulwark. Air has been blown into eight separate compartments, good insurance against sinking in case of rupture or puncture.

The strong arms and shoulders of Don handled the sweeps of one boat while Archie, the second guide, manned those of the other. It is no mean feat to manipulate the sweeps when the river is high, as it is to-day, the channel narrow, and the rapids violently active. A dozen times in our morning descent we rushed into a narrow channel which churned among huge boulders, the water standing up in successive waves to a height of three and four feet. We bounced safely through them all, clinging tightly to the metal frame, our confidence reinforced by the life preservers we were wearing.

In the lee of the rocks near the shore the water is quiet. Here almost invariably we found a rainbow or a cutthroat waiting for the fly. Time and again, at a word from Don, we cast a dry fly on a rock, dragged it over the top, and then allowed it to fall lightly to the surface. As it hit the water the trout would rise and strike, and another catch was on its way to net and boat. Occasionally we would hook one of the battling fish just before the raft entered a stretch of rapids. There was nothing to do but hold on to the railing and pole, dragging the catch on a tight line through the churning waters to a relatively quiet place beyond.

It was a pleasant surprise to find ourselves on the river this morning, for at one time it had seemed an almost impossible task to reach the small landing strip near the headwaters of the Middle Fork. At seven o'clock six of us and the pilot took off in the single-motored plane, at Salmon City, into a sky of clear blue. Climbing steadily to 8500 feet the pilot headed for the valley of the Middle Fork.

The scene from the plane can be described only by saying that the complete circle of the horizon contained more than a thousand peaks. Deep in the valleys were occasional patches of green, the only breaks in the vast monotony of towering hills. We were congratulating ourselves on the beautiful weather when it was noticed that the valleys were beginning to fog in. Flying at 8000 feet in the bright sunlight was fine, but our landing field was at 4000 feet somewhere below the clouds which smothered all but the bare peaks of the mountains. The soupy masses became solid and impenetrable, giving the impression that the valleys were filled with snow a few thousand feet deep.

There seemed not a chance of breaking through the barrier when a small hole appeared in the solid whiteness, an opening barely large enough for the plane to slip through. The pilot banked sharply and nosed down, the plane brushing the foggy margins of the opening. Then we were under the clouds a few hundred feet above the valley, the canyon walls on either side almost close enough to touch. Threading his way among the hills the veteran pilot picked up the rushing ribbon which marked the river, and followed it to the narrow landing strip we were longing to see. We all breathed a sigh of relief as the wheels hit the rough ground. I particularly, for I had made the hour-and-fifteen-minute journey sitting on the floor just forward of the small door of the plane. As I had climbed into the narrow spot near the tail the pilot had shouted, "Last man in slam the door." I had done so, but with some apprehension, for the lock arrangement was a simple one—a touch of the handle, and watch out below.

The afternoon journey on the river was featured by a sudden thunderstorm, the rain coming down in huge drops for almost half an hour. We slipped under tarpaulins, but the beauty of the rugged scenery as it unfolded tempted us to leave our heads exposed to the storm. The water dripped down our necks and backs but, as the guides prophesied, the hot sun which followed soon had us steaming, and then dry.

We ran rapid after rapid for a couple of hours before pulling into a rocky haven for a brief stop. Ever restless in such surroundings, I started to fish down the shore. Fifteen minutes later I was startled to see both boats rushing past in mid-river. The guide shouted to me to walk the shoreline to the proposed camp half a mile downstream. Alone in the wilderness I enjoyed one of my happiest hours, climbing my way slowly over the rockstrewn shore. Casting in likely spots I succeeded in taking three nice trout. I finished the half-mile and more, but no campsite appeared. Someone had misjudged the distance. There was nothing to do but continue on my way downstream, hugging the cliff which now towered over me.

When I had covered a mile I came upon a spot where the steep rocky mass dropped straight down into the water. I had my choice of crossing the mountain a thousand feet up or wading through. I chose the latter, and set out across the fifty-foot stretch. The cold water climbed above my waist, but I made the passage successfully over the sandy floor. Wet clothing and well-soaked boots offering no great discomfort in the scorching heat of the canyon, I again headed downstream. A couple of my friends had set out to look for me, but a wave and a shout allayed their fears.

The fire was roaring when I reached camp, and all preparations were on the way for the evening meal. From a large insulated ammunition box on the bottom of one of the rafts Don drew eight sirloin steaks. Soon they were sizzling on the metal plate over the wood fire. They cooked fast enough for the guides, but to the others, tired and hungry after the exercise and exposure, the wait seemed interminable. They were consumed in far less time than that required for cooking.

Our hunger satisfied, we set up camp for the night. Having spread our sleeping-bags on the sand spit and inflated the mattresses, we all gradually moved to the smouldering fire for a review of the happy day. The sun still shone on the canyon wall across the river, but the black shadow of the mountain behind, as it crept up the rocky face, gave warning of the approach of evening.

The men talked for an hour, mostly of the day's run and the prospects of the morrow. Soon they all yielded to Don and Archie and listened to tales of a country with which the two natives were intimately familiar from twenty years of running the river in the summer and guiding hunting parties in the fall. Archie, truly a character out of Bret Harte's tales, related story after story, all improved by an extraordinary vocabulary.

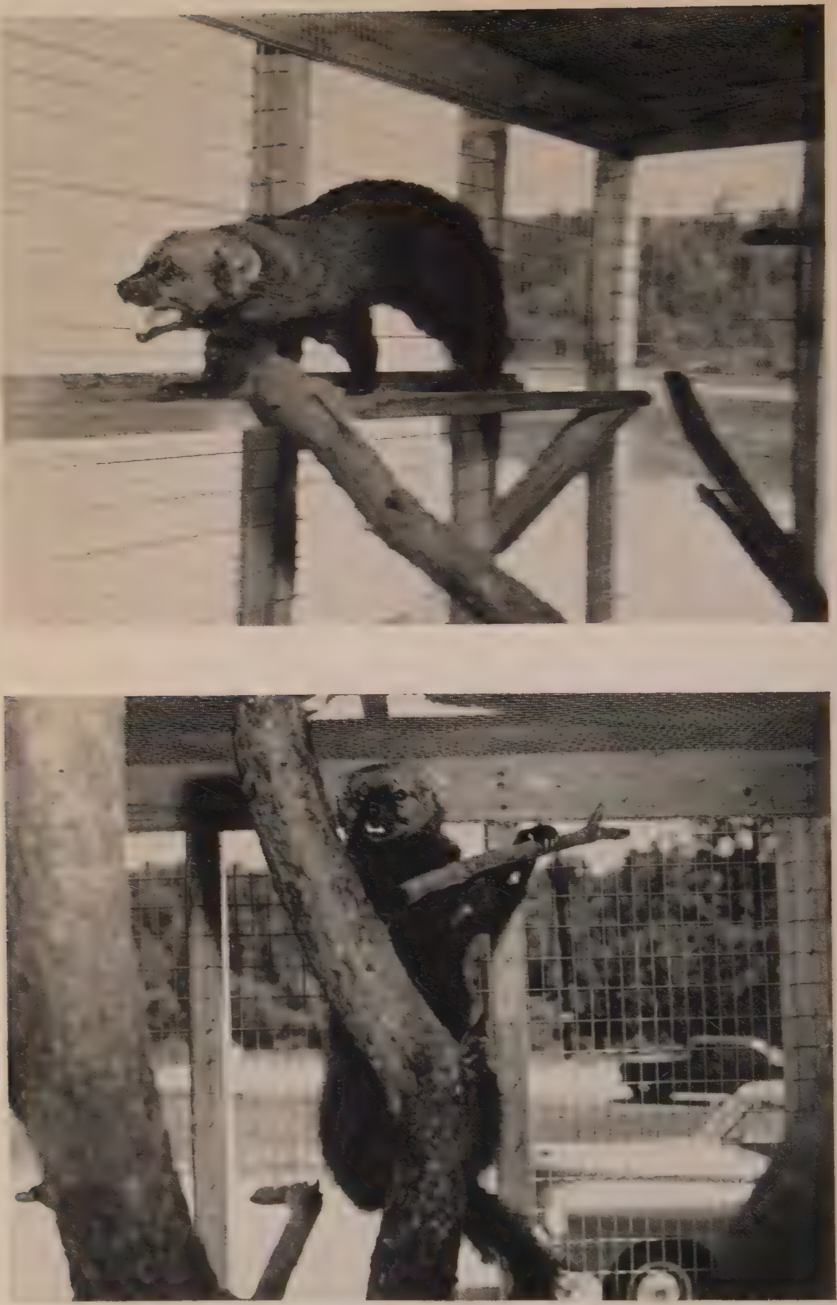
Long after the last trace of sunlight had disappeared we sat crosslegged around the crackling wood fire, the heat of which felt good in the now chilled canyon. Night closed in and the stars came out in a cloudless sky. In the east the hills were silhouetted against the light of the promised moon. The fire burned low and the men drifted one by one to their sleeping-bags. I lingered, reluctant to lose the spell of the hour and the place. Finally I too slipped into my sleeping-bag, content to be in the outside row where I could watch the black outlines of the tremendous pines, listen to the night sounds of the woods, and dream of tomorrow and the river.

Thomas J. Glennon

MIDDLE FORK OF THE SALMON RIVER
Loading the Rubber Boats

Thomas J. Glennon

MIDDLE FORK OF THE SALMON RIVER
Handling the Double Sweeps



N. H. Fish and Game Department

SAMMY, THE FISHER

In his Cage at the Bear Brook State Park

RESURGENCE OF THE FISHER IN NEW HAMPSHIRE

by GEORGE T. HAMILTON

SOMEWHERE ON THE SLOPES OF THE PRESIDENTIAL RANGE, in the White Mountains, a frantic snowshoe hare dashes madly into a clump of ground hemlock, young fir and spruce, in an effort to elude an enemy; fast, but not fast enough, for swiftly overtaking the hare in a brown blur of movement is a fisher, and in a few moments the hare dies a swift death. Farther south, in the Ossipee Range, a gray squirrel scampers helter-skelter high into a giant white pine tree; high, but not high enough, for climbing even faster and just as high a fisher, in fierce pursuit, quickly claims his next meal. Elsewhere, in central New Hampshire, a conservation officer gets a call on his two-way radio to go to the aid of a farmer who has a live fisher caught in a bobcat trap. Farther north, a trapper running his trap-line finds a frozen fisher, dead in his bobcat set. On a fine spring day a woodsman working at a logging job finds a baby fisher in a hollow stump. A summertime walker on a White Mountain trail sees a brown animal about the size of a fox suddenly cross the trail ahead of him, stop, glance in his direction, then in a burst of speed disappear from sight through the woods. These are just a few examples of incidents involving fisher which have occurred with increasing frequency during the last six or seven years, incidents which point to the extent to which the fisher has returned to his old haunts here in the Granite State.

The fisher, *Martes pennanti pennanti,* has many names. The name "fisher" is rather misleading, since this arboreal member of the weasel family probably spends much less time fishing than do his cousins, the otter and the mink. Although he will eat fish whenever the occasion presents itself, the fisher partakes of a varied diet. It is quite possible that the animal received his name from the early woodsmen, who perhaps observed him in the vicinity of streams, fishing, in the fall of the year when the trout were spawning. Although he is not a member of the cat family, in many parts of New Hampshire he is called "fishercat". Elsewhere in the United States and Canada he is called pekan, Pennant's marten, wejack, and blackcat, to list the more common names.

The fisher has a pointed face with broad, rounded ears, a lithe body somewhat like that of a fox, a long bushy tail, sturdy legs,

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GEORGE T. HAMILTON, a member of the Club, is an A.M.C. hutman of much experience. He has worked at Madison, Greenleaf, the Lakes, Pinkham and Dolly Copp, and is now assistant manager of the entire hut system. As a former conservation officer for the New Hampshire Fish and Game Department he is thoroughly familiar with the character and extent of the State's wildlife.

and very sharp claws. Upon seeing these claws one easily understands why the fisher is such a formidable fighter, and why he is such a capable tree-climber. His teeth are extremely sharp and are set in jaws which can snap shut like a steel trap. In coloring the fisher is generally dark brown, although the coat is lighter in the summertime than in winter. Often there are one or two white spots on his underparts. The most valuable pelts from the trappers' and fur-traders' viewpoint are those of the young females. Such pelts are a rich, dark brown. As fisher become older their pelts assume a grizzled appearance when the tips of the hair become increasingly white.

A large adult male will be around three feet in length; the females are considerably smaller. Weight for males is eight to twelve pounds, and for females four to eight. Tracks, with five toes front and hind although sometimes only four show, follow the two-print pattern characteristic of members of the weasel family. This pattern is formed when the fisher's hind legs land in the two spots his front legs have just vacated. According to Murie[1] the average walking stride of a large male fisher is thirteen inches, that of a female about nine, while the average jump of a large male is around twenty-six inches.

The gestation period of the fisher is unusually long, from 350 to 355 days. Mating takes place shortly after the young are born, whereupon a condition known as "discontinuous development" ensues, embryonic growth being arrested for several months. The kits are born in the early spring, one to four in a litter. They are usually brought up in a den or hollow tree by their mothers until they are able to travel through the woodlands. By autumn the young are capable of fending for themselves and the family breaks up.[2]

Dietwise the fisher is not fussy, being practically omnivorous in his habits. He is, of course, primarily a carnivore, but is known to eat such items as eggs, nuts, fruit and vegetables. His tremendous agility and great speed make most small animals available to him as main courses at mealtime. Rabbits, hares, squirrels, chipmunks and smaller rodents all fall prey to the voracious appetite of this fast-traveling weasel. He is also a fisherman of no mean ability. The fact that the fisher has been able to adjust to such a varied diet undoubtedly has a significant bearing on his remarkable re-establishment in New Hampshire.

As a former conservation officer for the New Hampshire Fish and Game Department I had the experience, in the winter and spring of 1954-5, of caring for a young, healthy and very active fisher. For the most part I fed Sammy, as we called him, the same diet fed the mink at one of New Hampshire's largest mink farms.

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[1] Olaus J. Murie, *A Field Guide to Animal Tracks,* 60-62.

[2] On the denning habits of the fisher see *The Ecology and Management of Fisher and Marten in Ontario,* by Anton de Vos, 14.

Sammy seemed to flourish on this diet, which consisted of the following: 20% mixed cereals, 10% pork liver, 20% horsemeat, 10% beef lungs and tripe, 5% beef melts, and 35% fish food. From time to time I supplemented this diet with eggs, fruit and vegetables. It was a comical sight to watch Sammy eat an egg, which he considered a great delicacy. He would smell it all over, lick the shell, roll it around gently for a few minutes, then pick it up in his jaws and remove it to another part of his cage, where he carefully cracked the shell and sucked out the white and yolk. Finally he would eat the shell.

As a rule, in most areas varying hare and porcupines will head the list of fisher victims. The fisher can kill a porcupine with much greater ease than can any other member of our New Hampshire wildlife. By using his great speed and strength he is able to flip an unfortunate porcupine on its back and swiftly rip open its body and gut it out. I have found the remains of porcupines in the woods, obviously victims of fisher attacks; only the hide and quills were left. Even the bones had been consumed by the voracious fisher. Henry Laramie, a biologist for the New Hampshire Fish and Game Department, recently told me of an experience in northern New Hampshire, whereby he was able to analyze such an encounter. Traveling through the woods after a fall of snow, Henry came upon fresh fisher and porcupine tracks. Evidently the fisher had made swift rushes at the porcupine, in an attempt to get at his soft underbelly. On two occasions the fisher jumped through the air over the porcupine; then the porcupine attempted to climb a tree, and the fisher knocked him down from it; finally, the fisher apparently got a chance to flip the porky on its back and killed it.

Interestingly enough, the fisher is practically immune to the sharp porcupine quills, which do not work their way into his body and cause infection as in the case of most other animals. One biologist has found evidence that the quills may work their way into the fishers' intestines and pass from the body through the alimentary canal. In any case, fisher do carry with them evidence of their porcupine conquests, for most adult fisher pelts will show some marks of porcupine quills. Obviously, porcupine meat is considered a great delicacy by fisher, and from a forester's viewpoint this is fortunate, since the fisher has helped deplete substantially the porcupine population in many parts of the United States and Canada. Porcupines subsist almost entirely on the bark of trees and they kill thousands of trees annually in these two countries.

Generally speaking, fisher will not live close to human habitations unless driven to this by hunger. But one cannot help thinking that if the food supply in the woodlands runs low fisher may eventually become a menace to farmers and raisers of poultry to a much greater degree than the raccoon or mink, or perhaps even the fox.

The fisher will not back down from a fight and has been known to tackle dogs, bobcats, beaver, raccoons, and his large cousin, the otter, who is himself a vicious fighter. Millard Chandler of North Chatham once told me about a fight between one of his big hounds and a fisher. After several minutes of furious action the fight ended in a draw, when the fisher broke off the engagement and climbed a nearby tree. When backed into a corner a fisher will spit and growl and snarl in the most forbidding manner, causing anyone to give thought before coming closer. Some interesting stories concern trappers who have released fisher alive from traps. Harry Thompson, a Sioux Indian originally from the Dakotas and now living in Tamworth, and Jack Boothman of Randolph are two trappers who have done so, and it is certainly no easy task. It is necessary to immobilize the trapped animal in some fashion, say by the use of a forked stick, in order to keep his razor-sharp claws and rapier teeth away from the trapper's arms and hands. I have been told of a trapper in Berlin who lost two fingers in attempting to release a fisher.

A fisher will fight a trap with every ounce of his strength. Perhaps some readers of APPALACHIA have observed the fisher I have mounted on the mantle in the living room of the lodge at Pinkham Notch Camp. This particular animal was trapped in my patrol during my conservation-officer days and, since the fisher is protected by law, I confiscated him and had him mounted for demonstration purposes in my school classes. Next time you are at Pinkham look closely and you will observe that his claws are badly torn and shredded; this is the result of tearing up the ground near the trap in a frenzy of action in the hopeless attempt to escape.

In another respect the fisher adopts certain traits of his relative the wolverine, the largest and most vicious member of the weasel family. He will rob traps, destroy for the love of destruction, and leave a foul-smelling musk behind him. Old-time trappers report that it was not uncommon for fisher to follow a sable trap-line and rob the animals from the traps, a habit which did not endear him to the trappers. The fisher has been known to kill more than he can eat and then foul the food so that other animals cannot use it.

During the several months I kept the fisher Sammy for the New Hampshire Department of Recreation and Forestry I had many chances to observe the characteristics and mannerisms of this animal. His agility had to be seen to be appreciated. Since fisher are basically nocturnal prowlers, Sammy slept during most of the daylight hours, curled up in a ball with his long tail covering his face. Sammy was quite proud of his fine-looking tail and spent much of his time washing it. But when not sleeping or washing himself he would prowl restlessly all over the cage, often whizzing merrily around the wire sides at dazzling rates of speed. A sudden noise, a strange person or animal outside his cage, a quick movement by someone or something—any of these would provoke Sammy into a frenzy of movement. And in addition to making the chattering noise so common to his kind, he would habitually whisk his long tail in a series of quick twitches almost in cadence with the chatters emerging from his throat.

Until Sammy was six or seven months old I was able to enter his cage at will and, although I could not handle him, I could feed him by hand with safety. By the time he was ten months old, however, he became quite vicious and unfriendly. The change occurred suddenly; he came at me one day as I entered the cage and drove me out. This performance continued for several days, after which I rarely attempted to enter the cage. I know of several fisher raised in captivity; in no case were their attendants able to make pets of them. The animals could be handled only on condition that the attendants donned heavy gloves, jackets and headgear; then, when food was held in the hands, with the arms outstretched, the fisher would jump on the attendants' shoulders, run along their arms, grab the food from their hands and leap to the ground. I have seen cases only of very young fisher, around three or four months old, who would take food from their attendants' hands and permit themselves to be stroked.

Potentially, the fisher is New Hampshire's most valuable furbearer. He is not too difficult to trap and as a result, over the years, trappers made great inroads in the fisher population in areas where an open season was held. According to Robert G. Hodgson, editor of the *Fur Trade Journal of Canada,* fisher pelts have always commanded good prices. From 1930 to 1950 these averaged from $35 to $65.[3] Fisher farming never reached the heights of mink and marten farming. As far as I have been able to determine, with possibly one or two exceptions in western Canada, it is practically non-existent at the present time in the United States and Canada.

Apparently fisher were quite widespread over many parts of these two countries prior to the turn of the century. From that time on we note a decided decrease in the number of pelts taken by trappers. "Records show that from 1821 to 1905 the Hudson Bay Company bought 377,338 fishers, but after 1905 the numbers were negligible."[4] "Fisher were not protected in New Hampshire until after the Civil War, and from this time until 1935 trapping was permitted through approximately half the year."[5] Fisher have been protected in New Hampshire since 1935.

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[3] "Fisher Raising," *The American Woodsman,* November, 1952, 20.

[4] Rae Hunt, "Fish and Game Notes," N. H. Fish and Game Dept., January, 1935.

[5] Helenette Silver, *History of New Hampshire Game and Furbearers,* 255.

The only records of fisher population in the state are those of the United States Forest Service at Laconia, who for many years made a sort of wildlife census. Although the census applied only to the White Mountain National Forest, this area has the most suitable terrain in the entire state for marten and fisher. Probably the most accurate figures are those for the mid-1930's, when many C.C.C. men were available and the census crews were well organized under competent leaders. For the years 1924-40 these estimates show that the number of fisher in the Forest was negligible, although it is believed that there have always been some in the more remote parts. This trend continued until the postwar period. Then, in the early 1950's, the reports of fisher began to increase. Trampers, hunters, fishermen, trappers and conservation officers saw them in ever greater numbers. Woodsmen found kits in the spring. In the winter, in some parts of the state, one could see more fisher tracks than those of any other animal. Recently I have talked with many trappers and conservation officers about the fisher situation; all agree that we have a bountiful supply. Fisher are now found farther south than anyone can remember in the past. They are extremely abundant in many sections of central and northern New Hampshire, where they often frequent areas adjacent to human habitation in their search for food. No longer is the fisher a rarity; no longer need we be concerned, as were some lovers of wildlife just twenty short years ago, with the possibility of losing the fisher from these parts forever; no longer need we regard the fisher as an animal only of the remote areas and one rarely seen. He has returned; he has adjusted to a changing environment, as have the deer and the bobcat before him; and from all appearance he will be with us for some time to come.

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CLIMBS IN THE CENTRAL CHUGACH MOUNTAINS, ALASKA

by LAWRENCE E. NIELSEN

MOST CLIMBERS PROBABLY DREAM of visiting an unexplored range of mountains and making first ascents of all the major peaks. We were nearly so fortunate last summer when we visited the central Chugach Mountains at the head of the Columbia Glacier in Alaska. This region is one of the most inaccessible areas in Alaska, and until our 1955 and 1957 expeditions was probably the least explored of the great mountain areas left in North America.

Our party consisted of Dave Bohn, photographer, from Portland, Ore.; Lt. Martin Mushkin, attorney at Ladd Air Force Base near Fairbanks, Alaska; Don Mokski, engineer, from Lackawanna, N. Y.; Arthur Maki, chemist, from Oregon State College, veteran of the 1955 expedition and co-leader; Lawrence Nielsen, chemical physicist, from Springfield, Mass., leader. Also, important to the success of the expedition was our pilot, Layton Bennett of Anchorage, Alaska, and his wheel-ski-equipped Piper Super-Cub plane.

We had all arrived in Anchorage by June 10 and we spent the day purchasing food and supplies. By that night Art, Dave and Don were on their way with nearly all our food and equipment to Trappers Den Roadhouse, 161 miles along the Glenn Highway from Anchorage. The next day Marty and I made last-minute purchases and helped Layton install the wheel-skis on his plane. We finished about midnight, and then we too started for Trappers Den in Marty's car. At Trappers Den we packed most of our food into five-man-day units, using enough variation to give four different types of menu. Each item of food was sealed in a polyethylene plastic bag of the appropriate size and the smaller bags were placed in larger ones for double protection. The plastic bags were put into cardboard boxes, which were securely tied, and a red banner was attached to each box to help us locate the food after an airdrop. As in the past, we found this method of packaging food entirely satisfactory. Food for the five of us weighed about ten pounds per day.

On June 14 the weather was satisfactory for glacier landings, so Layton transferred his base of operations to the gravel airstrip at Trappers Den. Layton and I made a reconnaissance flight and dropped spruce boughs to mark our landing area at 6500 feet on

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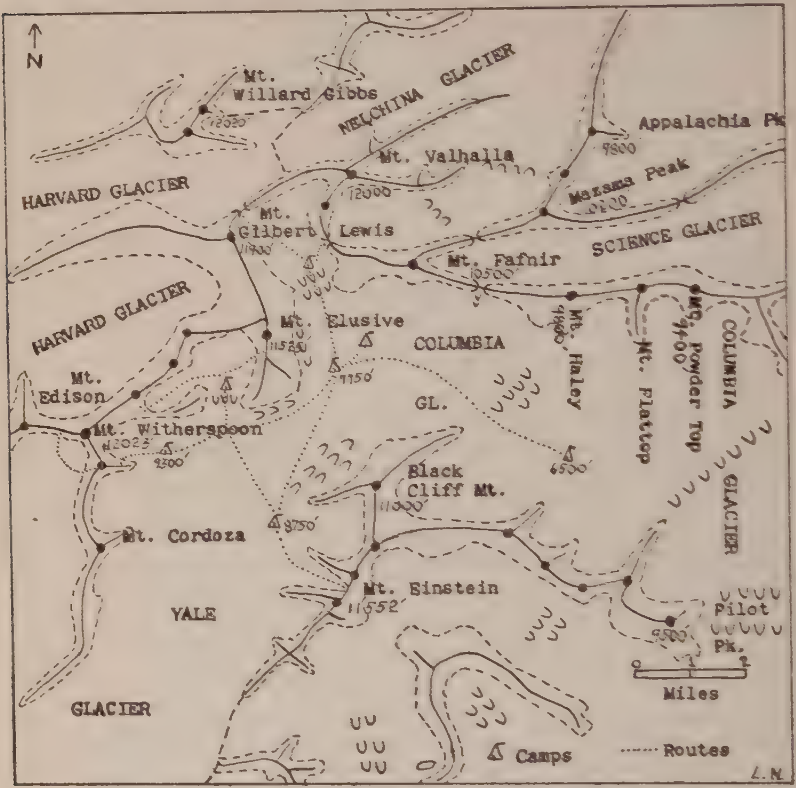
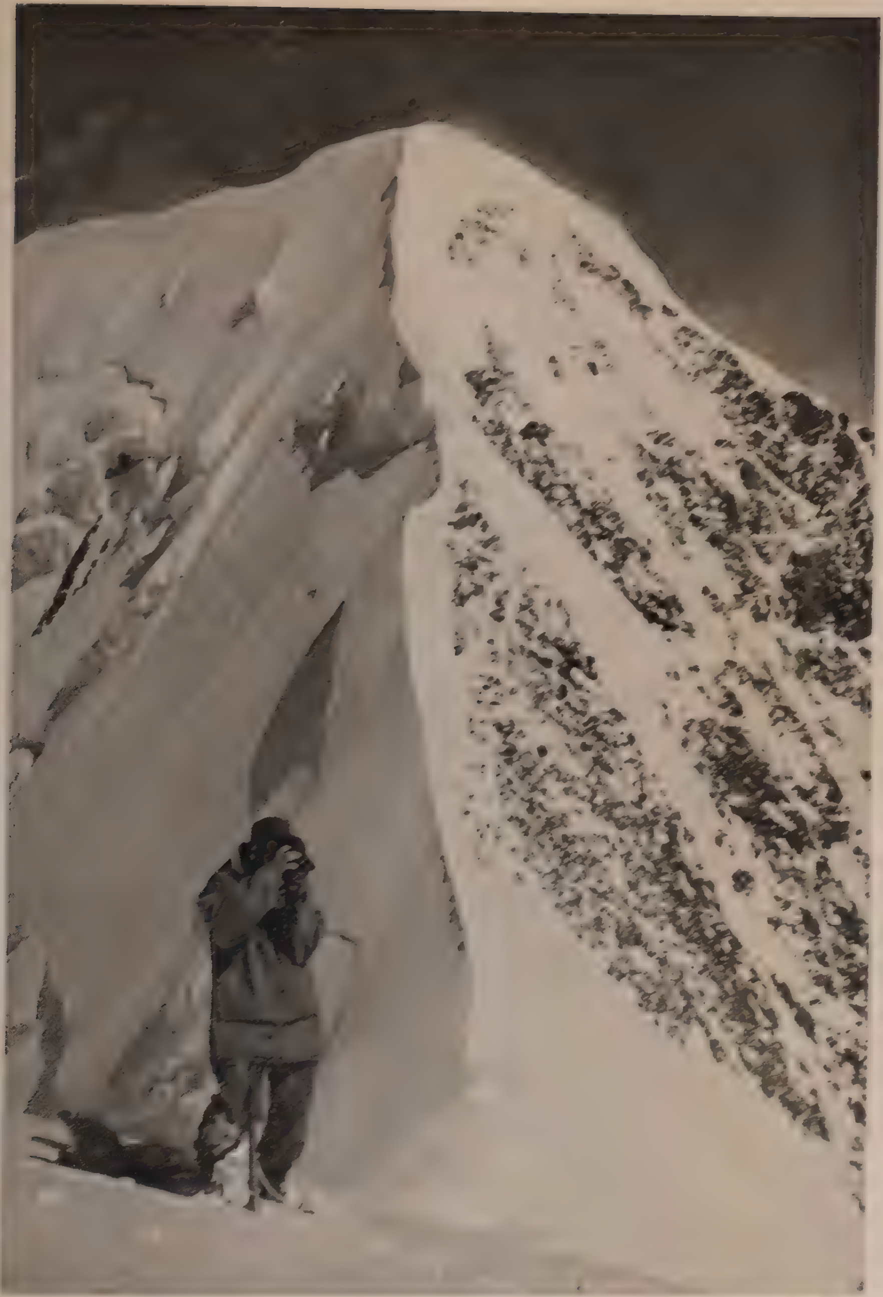
DR. LAWRENCE E. NIELSEN, a member of the Club, has contributed several articles to APPALACHIA on his climbs in Alaska and in the Cascade Range. His earlier attempt on Mt. Witherspoon was described in APPALACHIA XXIX (December 1955), 533-7.

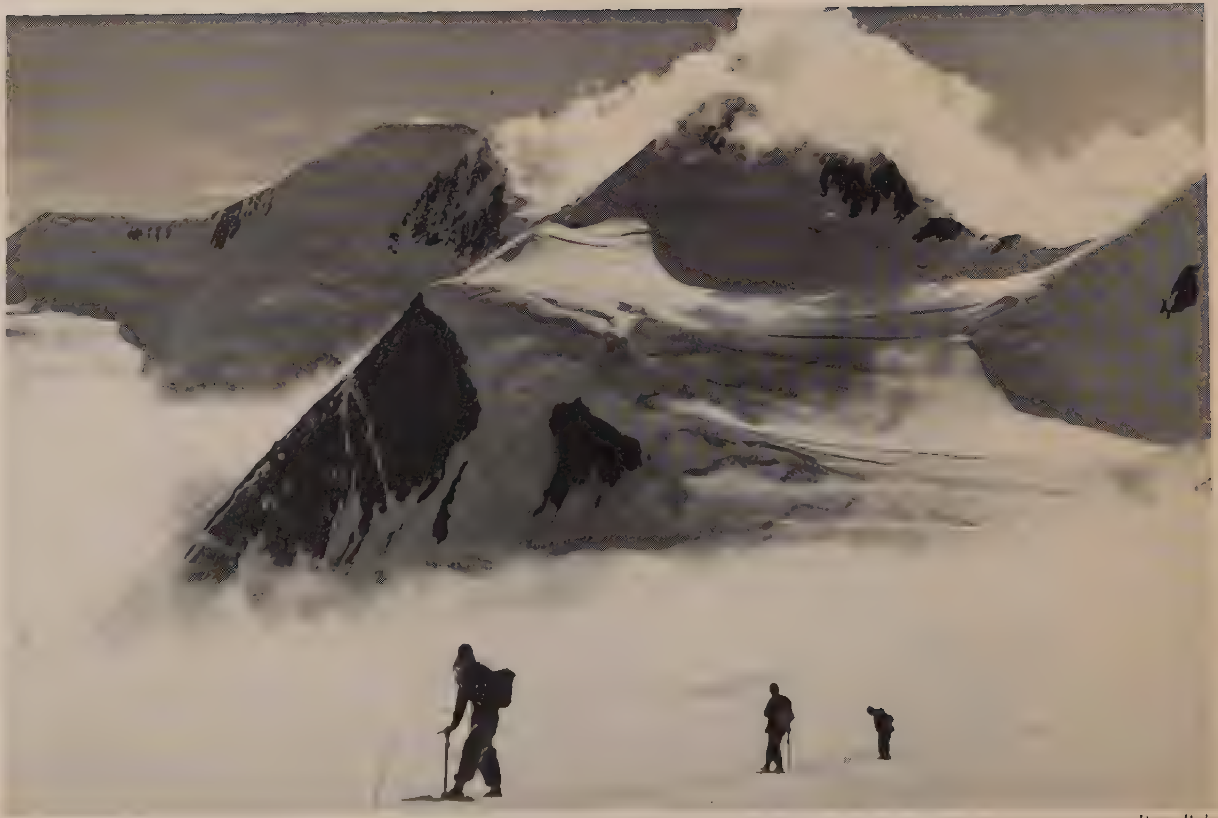
the Columbia Glacier about 65 miles south-southwest of Trappers Den. Later in the day Art, Dave and Marty landed on the ice. The next day Layton and Don made an airdrop of food at 7700 feet on the glacier at the foot of Mt. Elusive. Dave and Art had started the evening before to tramp the five miles to the site of the airdrop. Don and I then joined Marty on the glacier. We packed an aluminum-sheeting sled with supplies, and during the night we spent a miserable eight hours dragging the sled and carrying heavy packs to our base camp near the site of the airdrop. By the time we reached camp we were completely exhausted, and we really appreciated Dave's assistance in pulling the sled the last half-mile, and Art's hot breakfast.



After a few hours' sleep we started on up the glacier and set up a camp at 8750 feet near the base of Mt. Einstein (11,552 feet). This great ice-covered peak is the most prominent summit of the central Chugach Mountains as seen from much of the Prince William Sound area. The ascent of Mt. Einstein started at 11 a.m. on the 17th. We proceeded on snowshoes to the Yale-Columbia glaciers divide and then up a snow valley northwest of



THE SUMMIT RIDGE OF VALHALLA



Dave Bohn

MOUNT WITHERSPOON AND MOUNT EDISON

the peak to the point where the east side of the mountain breaks off in a great cliff. We switched to crampons and were finally able to cross a bergschrund to get on the ridge leading to the summit. Dave led the thrilling climb along this spectacular ridge. On our left a cliff dropped several thousand feet, on our right was a steep ice-slope broken up by crevasses and seracs, while the ridge itself was often interrupted by great blocks of ice. By now fog had rolled in and it was occasionally snowing. In the resulting white-out, at times we could not even see where the ridge was. We were on the ridge five hours before we reached the summit—a fairly large snow dome. On the summit the weather cleared enough for us to see Mt. Witherspoon and a few other peaks. After a few minutes we started back down and reached camp a half-hour after midnight in a heavy snowstorm.

Camp was next moved 3½ miles north to the basin between Mt. Elusive and Mt. Edison. It was comparatively easy to find a route around the giant crevasses of the icefall, or to cross the sagging snowbridges over these crevasses, but it was hard work carrying the packs and dragging the sled to over 9500-feet elevation. To make matters worse, it was a hot sunny day which roasted and blistered us. It seems during the whole trip we usually climbed during storms and moved camp on sunny days! After we reached camp, it started snowing and the storm continued through the morning of June 20, giving us about six inches of new snow. The 21st was a hot day, with some fog. So what did we do? We snowshoed 10 miles to carry in supplies from our cache at the Airdrop Camp and to re-mark our trail with bamboo wands. However, when we arrived at the high camp in the evening the weather turned cold and windy. It snowed during the night and the morning of the 22nd.

About noon of June 22 it started clearing and at 3 p.m. we set out to climb Mt. Elusive. The route was fairly obvious; we went east to a high col at 10,500 feet and then up the sharp knife-edge ridge which levels out near the summit and becomes corniced. Art was leading when Layton flew in to make sure we were all right. He must have been surprised when Dave attracted his attention with a signal mirror and he saw us clinging to the steep slope three thousand feet above him. Layton circled to gain altitude and then buzzed us a couple of times before he returned to Anchorage. Near the summit of Mt. Elusive there were large cornices, so we had to use a great deal of care. We reached the top at 6.45 p.m., but again we were disappointed, as all the peaks were in fog. My altimeter read 11,675 feet.

The same day we had another unusual experience at camp. There was a loud snapping sound and the snow surface jerked as in a violent earthquake. We found a crevasse had formed within a foot of my front tent-stake; it was nearly an inch wide and several hundred yards long. We watched our baby crevasse grow for several days. When we finally left this camp, the crevasse was up to four inches wide and its downhill side had lifted several inches in relation to the uphill side.

On June 23 an attempt was made on Mt. Edison. After crossing a large number of sagging snowbridges which covered crevasses up to at least 25 feet wide, we reached the base of the final pinnacle—in the fog as usual. The climb was called off when Dave discovered dangerous windslab on the steep face.

The following day was sunny, so we moved camp to about 9300 feet on the east side of Mt. Witherspoon, near our 1955 camp. We were up early on the 25th and by 5 a.m. all of us except Don started up Mt. Witherspoon. Art led us up nearly the same route we had used in 1955. However, snow conditions were now much different on the east ridge leading to the south summit; many crevasses had opened. From the south summit we started north along the knife-edge ridge to the main summit. In places the ridge was less than a foot wide, with terrific exposure on both sides. Soon the ridge became corniced and broken up by giant ice-blocks, so we had to move out on the east face. After an hour or two of being under such nervous strain, some of us decided the ridge was too much for us, so we all returned to the south summit. For a while it looked as though Mt. Witherspoon had beaten us for a second time. However, Art was able to find a route down through the crevasses of the west face to a branch of the Yale Glacier, a thousand feet below the south summit. We tramped about a mile to the head of the glacier and were fortunate to find one bridge across the bergschrund; the bridge was weak, but it held us, although I did stick one foot through it. We were now on the ridge running west from the main summit of Mt. Witherspoon. This is a spectacular ridge with tremendous cornices, but we were pleased to find that it was comparatively easy to climb. We reached the summit (12,023 ft.) at 3.40 in the afternoon. For once we had beautiful weather and were able to appreciate the view. The upper Harvard Glacier and the sharp peaks towering above it were especially impressive. Far to the south we could see the ocean. My level indicated we were higher than any peak for many miles in any direction; the closest rival of Mt. Witherspoon appeared to be Mt. Willard Gibbs, with about the same elevation. We spent some time on the snow pinnacle before starting for camp. In our exhausted condition the climb from the Yale Glacier back to the south summit was pure torture. The descent of its steep east ridge was not much better. We reached camp after sixteen and one-half hours of climbing. Don had seen us coming and welcomed us with soup, ham and tea.

Sometime between June 19 and 22 an impressive ice-avalanche had fallen from the cliffs of Mt. Edison and had spread for a mile across the glacier not far from our Mt. Witherspoon camp. The avalanche consisted of eight or nine wide streams of ice, 10 to 25 feet in thickness. The streams followed different directions and some made sweeping curves. Several streams of ice had torn through others, leaving behind a track like a giant bobsled run up to 50 feet wide. This type of avalanche is comparatively rare and the one in question was the largest any of us had ever observed.

After the Witherspoon climb we returned to base camp at the foot of Mt. Elusive. Here we had a snowstorm, but some of the fellows seemed glad, as it gave them an excuse to cook in the snow-house they had dug. We had built this snow-house for the fun of it, but it proved to be very useful.

During the night of June 27 we moved camp to the glacier basin between Mt. Elusive and Mt. Valhalla. The icefall opposite Mt. Elusive was a maze of bad crevasses and dangerously thin bridges. Since the poor light at night gave no contrast, a good route was hard to find. About the same time a bad blizzard hit us, so we made a camp with one crevasse a few feet in front of our tents and another one just behind them. At times during the night I thought our tents would be ripped apart or blown away by the winds. When the storm was over by noon the next day, we started to climb Mt. Gilbert Lewis (11,900 ft.). Nearly three miles of snowshoeing brought us to the Harvard Glacier divide, where we changed to crampons and started up the broad north ridge of the mountain. The climbing was easy and we were about 300 feet below the summit when Art put his ice-axe in the snow to belay Dave around a small ice-cliff. There was a sharp sound and a sinking of the snow surface, followed a second later by another cracking noise and jerking of the surface. We were badly unnerved and got off the mountain as soon as possible when we realized that dangerous windslab conditions existed; we were indeed fortunate that an avalanche did not sweep us away.

The same day we had another unusual experience. We found five live bees on the glacier. The closest region with any vegetation was about 30 miles away and on the other side of the mountain range. High winds must have blown them onto the glacier.

The following day gave us another snowstorm. Although the day after, which was the last day of June, was warm and sunny, the snow conditions were not safe for climbing. We sat in camp listening to the *whomp* of snowbridges falling into the crevasses around us, or the roar of avalanches down the faces of Mts. Elusive and Valhalla. While we were watching, the snowbridge by which we had crossed the crevasse back of camp disappeared before our eyes with a loud *whomp*. A 10-foot space now prevented our return to base camp by way of the icefall!

We had saved Mt. Valhalla for our last climb. Everyone who has seen it agrees that it is the most beautiful peak of the central Chugach Range and the most difficult to climb. It is indeed a fitting "throne for the gods". We were up at 11.30 p.m. on June 30, and shortly after midnight were on our way to Valhalla. Our route led east to the pass between the south summit of our objective and Mt. Fafnir. We put on crampons here, and after watching a beautiful sunrise over the Nelchina Glacier, we started up the broad ridge leading to the south summit. It was easy climbing except for one area of overhanging seracs. On the south summit (about 11,500 ft.) we had a second breakfast before dropping down several hundred feet to the foot of a ridge leading to the main summit of Valhalla. At this point Don and Marty decided that they lacked the experience to tackle this ridge. I was not sure but that I was in the same boat; however, Dave and Art seemed confident of success, so I tagged along with them. The Valhalla ridge is very similar to the great knife-edge ridge on Mt. Witherspoon. It starts out very narrow and then becomes corniced. Fortunately, there was only one giant ice-block which had to be climbed over. The east side of the ridge is 3,000 feet above the Nelchina Glacier and so steep that snow cannot hang on its rocky face for long. I was glad the other fellows kept me so busy climbing and belaying that little time was left for looking about or for contemplating the results of a slip! At 8.45 a.m. we stood on the narrow corniced summit of Mt. Valhalla; my altimeter indicated the elevation was about 12,000 feet. Many miles to the north was the first vegetation we had seen in over two weeks. At the far ends of the Nelchina and Tazlina Glaciers we could see many spectacular rock pinnacles, but in a few minutes clouds obscured most of the landscape below us.

In the early morning the snow had been in excellent condition, but by now the sun had softened it to a dangerous degree. Our troubles were not over, even after we carefully climbed back down the ridge. The snow on the south peak of Valhalla was so soft that it threatened to avalanche, and we were constantly stepping into small crevasses (at least we hoped they were small). Finally we sat down and glissaded across the bridges over the crevasses; this was much faster and much easier on our tempers.

After a few hours' rest at camp we started back to base camp. Our old route was no longer possible, so we worked our way through the crevasses to the foot of Mt. Elusive. Here we found a very easy route, but not a pleasant one, as we sometimes had to climb over avalanche debris from the great ice-cliffs on the side of the mountain.

We had a snowstorm during July 2 and 3, but moved camp down glacier about a mile to a spot suitable for an airstrip. Even though visibility was poor and the winds very erratic, Layton was able to fly Marty and Dave out to Trappers Den on the 4th. By this time it was snowing again. By July 5 we had about two feet of new wet snow. The tents were beginning to leak. It snowed again on the 6th. There was not much to do except listen to the avalanches coming down the side of Mt. Fafnir as we lay in our tents. The next day was beautiful, but clouds pouring over the passes indicated a storm to the north, which prevented Layton from flying us out. It snowed again on the 8th and 9th, but the barometer started to rise sharply during the evening of the 9th. We were getting low on food, so had begun to ration it out in smaller portions. At 1.45 a.m. of July 10 we were wakened by the sound of Layton's plane. How he was able to land in the semi-darkness was a mystery, but in any case we were pleased to see him. A few hours later we were all back at Trappers Den, admiring the sight of vegetation and stuffing ourselves with hamburgers. Everyone agreed it had been a very successful trip. It had snowed on parts of sixteen days, and fog had occurred on seventeen days out of twenty-five; this was excellent weather for the Chugach Mountains!

SCHOODIC MOUNTAIN, MAINE

by CHARLES B. FOBES

ABOUT FIVE MILES in a northeasterly direction from the head of Frenchman's Bay, Maine, is a group of low elevations consisting of Schoodic, Black, Caribou, Catherine and Tunk Mountains. These are the principal summits, but there are six other lesser peaks. Although their heights are not much over one thousand feet, they are well known in this part of Maine. With the exception of the mountains in Acadia National Park they are the most prominent cluster or group of hills near the coast, east of the Penobscot River. This article concerns itself primarily with Schoodic Mountain, the most southerly of the group.

Schoodic Mountain, with an elevation of 1069 feet, is situated at the southern edge of Township Number 9 near the Sullivan town line. It lies between Donnell Pond on the north and Flanders Pond on the south. Since the area has been the scene of much glacial activity, it is not surprising to find Schoodic with typical stoss and lee sides. The gentle northerly slope and abrupt southerly side create the form that easily identifies this mountain among the others in the group. Caribou, Catherine and Tunk have a distinct east-and-west longitudinal axis. Schoodic Monutain and the neighboring hills are well shown on the U.S.G.S. Tunk Lake quadrangle.

In the Library of Congress is a manuscript map of the New England coast that is supposed to have been drawn by Samuel de Champlain in 1607 or 1608. John T. Adams states that "Champlain's knowledge of the coast and its possibilities was quite as accurate, probably, as that of Gosnold, or Pring, or Weymouth". On this map Penobscot Bay is clearly indicated, with the Camden Hills rising from the sea along the western edge. On the eastern side are two mountains situated north of Pentagoet, which is now called Castine. These two hills could well be Blue Hill and Great Mountain, the latter being in the town of Orland. But more pertinent is the group of four mountains shown to the northeast of "Les Isles du Mont Desert", just beyond the head of an estuary about where Sullivan now lies. There is little doubt in my mind that the prominent forms of Schoodic Mountain and her associated peaks of Tunk, Caribou and Black Mountains are those Champlain placed on his map. Catherine Mountain might well be hidden by the bulk of Black Mountain from the deck of a ship in Frenchman's Bay.

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Just when Schoodic Mountain became known as such is not certain. The name "Schoodic" has been applied to peninsulas, bogs, streams, lakes and mountains in Maine. Other Schoodic mountains are located in Township 5, Range 9, Piscataquis County, and on the end of Schoodic Peninsula, a part of Acadia National Park. Fannie Eckstorm, in *Indian Place-Names of the Penobscot Valley and the Maine Coast,* says: "There are three roots, quite unlike in meaning, which are covered by the English word Schoodic. They may be called the 'fire Schoodic', the 'trout Schoodic' and the 'point Schoodic'." From Kilby's *History of Eastport, Maine,* 1888, we find that the meaning of "Scoudiac" was interpreted by the Passamaquoddy Indian chief, Francis Joseph Neptune, in 1798 as a "great clear place, because all the country had been burnt". Many of the mountains bear Indian names that have no meaningful derivation, but Schoodic Mountain in Township Number 9 is well-named if we use the "fire Schoodic" root, because this mountain has been the scene of past forest fires as indicated by the present forest-cover type.

Originally the forests in this part of Maine were composed of a spruce-fir-northern-hardwood mixture. Probably the climax forest type on Schoodic was a red spruce and balsam fir growth, since the soil was shallow and more or less sterile. The exposure toward the ocean provided considerable moisture at all seasons. With the destruction of the seedbed by forest fires a sub-climax type of paper birch, northern red oak, maple, poplar and inferior species over-ran the ground. It is now difficult to imagine that Franklin, the town adjoining Township Number 9 on the west, at one time produced more spars, railroad ties and ship timbers than any other town of equal size in Hancock or Washington County. However, in scattered areas where the soil has not been disturbed by fire there are today small stands of spruce and fir, but the forest complex is more of the hardwood type.

From a continental point of view Schoodic Mountain lies within the Canadian Biotic Province. A. F. Hill, in *Vegetation of Penobscot Bay Region,* pictures the whole area as in a great Transition Zone where the balsam fir is reaching a southern and the sugar maple is near its northern limit. Be that as it may, we find black bear, moose and northern white-tailed deer in the area. Formerly caribou once roamed here, for one reference states that the last caribou was shot about 1860 on the slope of Black Mountain. The birds in this area are too numerous to mention, but the different habitats offer a great variety of bird species. The altitude of Schoodic Mountain is not great enough to present any distinct zonation of life, but due to a changing soil condition on the slopes we find an interesting shrub and small-plant flora.

It is evident that Schoodic Mountain is a mass of granite that has resisted the erosive powers of the ice-sheet and the weathering of more recent years. The bulk of Schoodic is composed of a biotite granite that lies in a great circular complex of granite between Ellsworth and Cherryfield. One of the results of the glaciation in this part of Hancock County is the great number of lakes; no less than twenty may be found in the area surrounding this monadnock. Some are only bog ponds, while others are attractive bodies of water. One small mountain pond can be seen, on the Tunk Lake sheet, located near the summit of Black Mountain, just east of Schoodic Mountain.

There is only one trail to the summit of Schoodic Mountain; this is maintained by the Maine Forest Service. Because of the commanding view from the mountain the Maine Forest Service has erected a fire lookout tower. The original tower was made of wood and placed there in 1914. The present one was erected in 1920; it is a steel tower twenty-four feet in height.

The start of the trail is in East Franklin, to the rear of a house near the bridge at the head of Hog Bay. Here a narrow woods road leads easterly about 1.2 miles to a point where the Maine Central Railroad track is crossed. The road is passable for automobiles to the railroad track but much care must be exercised; it is preferable to park automobiles at the road beginning. After crossing the railroad track turn sharp right at the gravel pit and follow the right of way about 200 yards. Here the road leaves the right of way, swinging slightly to the left; still follow the road for nearly three-quarters of a mile. At this point the trail leaves the woods road on the left and leads directly to the fire watchman's cabin at an elevation of 300 feet. Behind the cabin the trail climbs steeply through a second growth of hardwoods to a col between Schoodic Nubble and the main summit. Here it swings more directly to the east and soon emerges into a sparse growth of some spruce and fir. The barren summit area is seen directly ahead and by using the telephone line as guide over the open ledges the summit is easily reached. The total distance from East Franklin to the tower is approximately 3¼ miles. The grades are slight until the watchman's cabin is reached, so the time required to climb the mountain is only 1½ hours. The time for the descent is just a little over one hour.

Unlike some mountains situated on the coastal plain, Schoodic affords a view that is pleasing and not monotonous. The picturesque lakes and bogs and the nearby forms of Tunk, Catherine, and Black mountains diversify the scene. In the distance the mountains on Mount Desert Island, the Camden Hills, Peaked (Clifton), Passadumkeag and Humpback Mountains may be seen. On clear days the form of Katahdin is visible.

In conclusion it may be said that Schoodic Mountain is a most satisfying climb that can be accomplished in half a day. It should be included in any list of mountains worth climbing in this part of Maine.

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ARMCHAIR OVER CHOCORUA

by Edgar F. Wright

This is the story of a nostalgic ride over the White Mountains. For forty-odd years I tramped and camped among them. Ten years had elapsed since the last trip, when a recent summer found me in Boston. With the time and the urge, I rented a car and headed north. As I neared the mountains I toyed with the idea of an "armchair" ride over all the old familiar trails. At Laconia Airport I rented a Piper Tri-Pacer plane, flown by an ex-army pilot who regularly drops trout for the N. H. Fish and Game Department in those little, hard-to-reach ponds. He studied my crude flight-plan and, while he readily agreed to fly me, pointed out that there would be some difficult spots. These we later discovered.

It was a clear, sunny day with a little haze beginning to form. I had never before been in a small plane and the tiny Piper seemed veritably to "hop" into the air. We crossed Winnipesaukee and passed over our first objective, the small settlement in the Ossipee Range between Mt. Whittier and Mt. Shaw. This was a spot I had never visited and had always been curious to see. Then we turned north over Tamworth, where I have spent many happy summers. Memories of bygone years dotted the landscape. There to the west was Sandwich, where my dear friend and former teacher, Cornelius Weygandt, spends his summers, and about whose "erudite" and "much traveled" chickens Robert Frost wrote—with tongue in his cheek. Soaring over beautiful Lake Chocorua I could see, in memory, where Virginia, my wife, and I once called on LeGrand Cannon to express our humble thanks for his *Look to the Mountain.* Thence to the mountain itself, Chocorua, the first-beloved of so many climbers. We circled it counterclockwise. How different it looks from the air! It was difficult to pick out Chocorua's Rock and some other landmarks which were so familiar on foot. But there was the shelter hut, substantially built of rock by the Forest Service. Back in 1909 an impressive two-story house stood on its site. In fact, some of the original granite slabs which formed its foundation are embodied in the new hut. The house had been built, I believe, by Jim Liberty with great imagination and huge personal labor. There was a bay-window facing the lake and I recall sitting in a rocking chair, on

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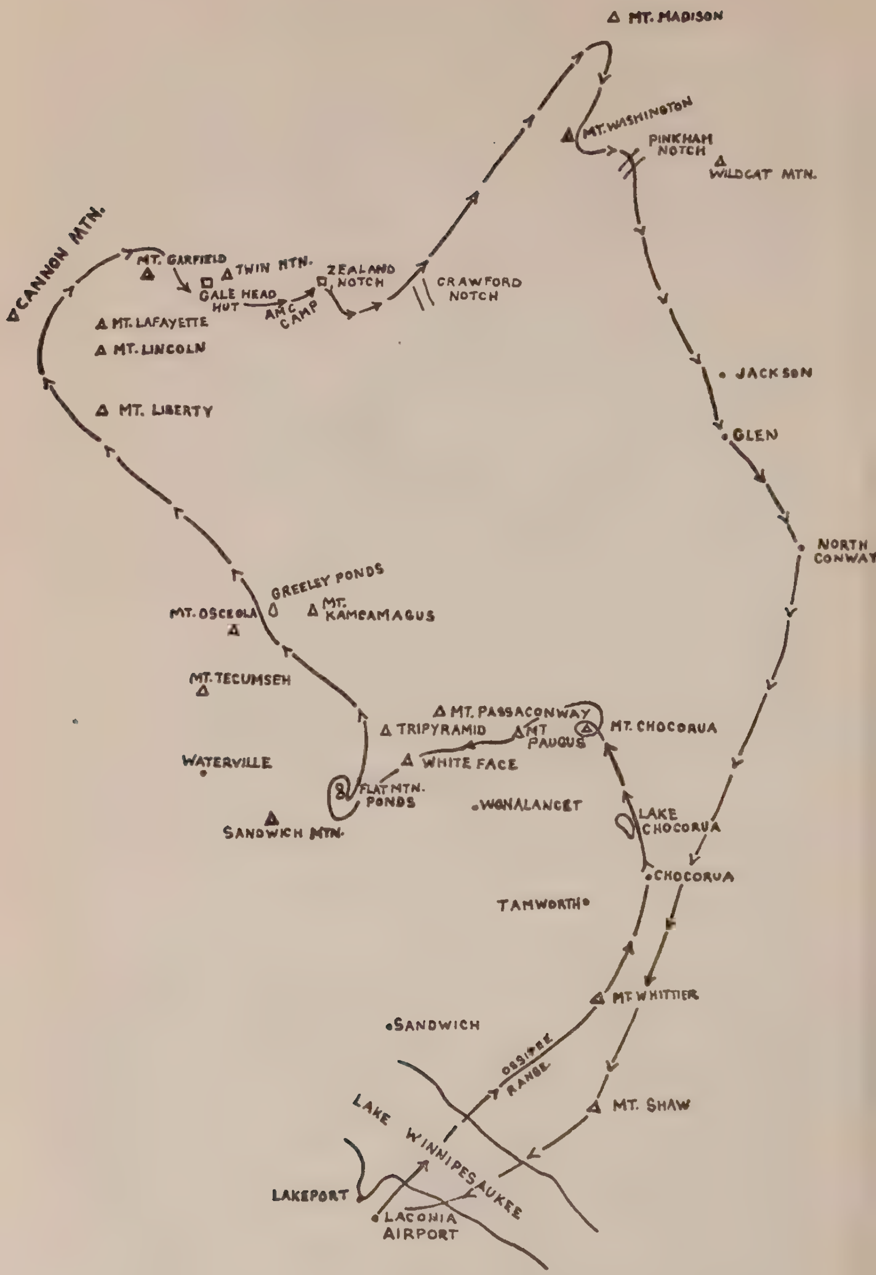
a carpeted floor, and enjoying fresh lemonade and doughnuts. Years later a great wind came, and although it was "built upon a rock" the house was scattered all over the mountainside. The next year I met Roger Twitchell, of Chocorua, with a band of boys, who made a very comfortable shelter-cabin out of the remains.

We had to move on. You cannot stop by the trail in the sky, so we flew over Hedgehog and Paugus—Old Shag it used to be called—and tried to get a peek at the cozy little shelter of that name. I did, however, presently see the Bowl, a place on the map I had never viewed. It indeed lives up to its name. After coming over the rounded summit of Wonalancet my pilot nonchalantly remarked that we had just lost two thousand feet of altitude. I had not even felt it, having been busy trying to pick out the Old Mast Road and Square Ledge. This was the first of several severe up-and-down drafts we encountered. We were flying fairly low, at about two or three thousand feet. Below, in Wonalancet, was the memory of a pitch-black night when Hank Collins and I almost stumbled over two grown bear-cubs while trying to find our shelter tent. The next morning we found that the cubs *and* their mother had been raiding the Ferncroft orchard. We were grateful that she decided to stay out of the welcoming committee.

MEMORIES OVER CHOCORUA

Climbing out of this lovely valley, we circled the south wall of Whiteface. There is a tiny cave just below the top ledge where I


MT. MADISON
MT. WASHINGTON
PINKHAM NOTCH
WILDCAT MTN.
CANNON MTN.
MT. GARFIELD
TWIN MTN.
ZEALAND NOTCH
GALE HEAD HUT
AMC CAMP
CRAWFORD NOTCH
MT. LAFAYETTE
MT. LINCOLN
MT. LIBERTY
JACKSON
GLEN
NORTH CONWAY
GREELEY PONDS
MT. OSCEOLA
MT. KAMCAMAGUS
MT. TECUMSEH
MT. PASSACONWAY
TRIPYRAMID
MT PAUGUS
MT. CHOCORUA
WATERVILLE
WHITE FACE
FLAT MTN. PONDS
WONALANCET
SANDWICH MTN.
LAKE CHOCORUA
CHOCORUA
TAMWORTH
MT. WHITTIER
SANDWICH
OSSIPEE RANGE
MT. SHAW
LAKE WINNIPESAUKEE
LAKEPORT
LACONIA AIRPORT

once spent a wonderful night. A full moon was shining over the Belknaps, and it spread a wide silver carpet the full length of Winnipesaukee, making it, indeed, the well-named "Smile of the Great Spirit". I also recalled that here, at my request, Bill Child once took my son Doug up on a rope—a kindly thing to do, for such an experienced and well-known mountain climber. Next we headed for Sandwich Dome, passing over the ponds between the two low summits of Flat Mountain. Many is the time I have sheltered in the old lumber camp, but now the sun cast no shadows: all the logs lay flat and bleached on the ground. The burnt-out timberland, however, was green again. We doubled back over the ponds and turned between north Flat Mountain and the spur of Whiteface over Lost Pass. Here Hank and I, many years ago, rediscovered the old lost trail, and even some of the old blue blazes, joining the ponds with the Woodbury Trail.[1]

A DOWN-DRAFT OVER WONALANCET

We flew parallel to the sharp peaks of Tripyramid, that mountain with the northern face a steep polished slab of granite while the south face is a seemingly endless pitch of crumbling gravel which overflows your shoe-tops at every step—and no water the entire way. Then we swung down over the pleasant meadows of Waterville, past the old inn and its little golf course. I spent the very next night there, but my old friend and the former owner,

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[1] See APPALACHIA XXI (June, 1936), 117-9.

David Austin, was no longer there to greet me. A sharp swing north and we were soon over Greeley Ponds, a three-mile walk from the inn but reached in less than that many minutes. Even from the air the campsite is dreary and bare of the luxuriant foliage of yesteryear. I recall a trip when the C.C.C. were at work constructing steps, unnecessary handrails and little bridges. Professor Whittlesey of Yale, who preceded me, wrote in the Forest register, "I prefer it unabridged!" Flying through the narrow gap between Osceola and Kancamagus was thrilling, but it could not compare with our approach to Franconia Notch. As we headed directly for Cannon Mountain and the Great Stone Face, all I could see was stratified rock where I knew the face should be, but when we swung to the right over Echo Lake the bold outline of the face began to take shape and we passed it, as it were, eye-to-eye, an unforgettable experience.

GREETINGS TO THE OLD MAN

Circling east, after passing Lafayette and Eagle Cliff, we doubled south between Garfield and Twin Mountain. Here again was a well-remembered spot. Galehead Hut sheltered Hank and me in that great rain which came just before the hurricane of 1938. We spent two nights in the kitchen of the hut, the main part having been officially closed a day or two earlier. A few odds and ends of food fortunately left by the hut boys carried us through. The great blow came a few days later. The hut stood it well, but we were glad to have missed it. A trip the next summer showed the tremendous force of the wind through that notch. It is well named Galehead. We circled over the vast Pemigewasset Wilderness, following the stream up past Thoreau Falls. In our plane the tiresome tramps through that great expanse of uninteresting timberland seemed to shrink, and in a few minutes we were turning into Zealand Notch, past Whitewall Mountain on our right. Soon, on our left and quite clear, was the snug A.M.C. hut on the ledge by Zealand Falls. A little farther on we circled the pond and flew back through the notch towards Carrigain, but then turned east and cut across to Crawford Notch. As we turned north again, the Base Station soon became clearly visible, with two tiny, puffing trains ascending the cog railway. We partly circled Mt. Washington through the notch south of Jefferson and flew across Joe Dodge's hospitable camp, where Joe told me, a few days later, that he had seen us fly over. Only those who have measured his kindness, as I have, know its breadth.

Now, with the great panorama of Tuckerman Ravine facing us, my camera ran out of film and also jammed. We were at about five thousand feet, so we circled back, climbing a bit, and I finally got the new film in and working as we again swung by. There was the headwall, with the last vestiges of the snow bridge at its base. The view of the great amphitheater from this vantage point is grand indeed.

We had now flown about as much as the exchequer would stand, so we headed south through Pinkham Notch, looking down for a glimpse of Glen Ellis Falls. Here in the river, years ago, I dropped a watch while dressing after a swim. In spite of a long search, in the icy water, it could not be found. The watch was of little value but there was a medal on the fob, bearing my name. Years later a young fisherman from Portsmouth spotted it, and after a devious journey it caught up with me in England. We followed the Ellis River and then the Saco down past Jackson and Conway, with a last look at Chocorua and its lake. Soon we were over Winnipesaukee, and here my pilot pointed out a square tower on one of the islands. He said it was a very old church, built there for better protection against the Indians, but that he had never been able to turn up any authentic history about it. He also remarked that on our trip he had had some fancy flying to do, to handle the air currents, but that he had had as much fun out of it as he hoped I had.

We landed at Laconia after a two-and-a-quarter-hour flight covering practically all the trails and mountains I had ever climbed or camped on. When you can no longer enjoy yourself on foot, with a heavy pack, you can take my word for it that this armchair method is well worth trying and something you will long remember.

ASCENT OF MOUNT MICHELSON, ALASKA

by JOHN P. THOMSON

THE BROOKS RANGE LIES IN THE EXTREME NORTHERN PART OF ALASKA and extends for over 500 miles east and west between the Canadian border and the Chukchi Sea.

Highest known mountain in this group of wild and rugged peaks is Mt. Michelson, 9239 feet above sea-level, in the portion of the range known as the Romanzoff Mountains. Michelson, which has several glaciers near it, lies slightly west of the 144th meridian west of Greenwich and is about 69 degrees, 15 minutes north of the equator.

Last April our two-man party, consisting of R. E. (Pete) Isto and myself, made what we believe to be the first ascent of Mt. Michelson.

The expedition started from Fairbanks, 330 miles by air south of Michelson, on Monday, April 21. Horace Black, an experienced bush pilot, flew us with our gear and food in a 150-horsepower, single-engine Tri-Pacer. The flight, with one stop at Fort Yukon on the Yukon River, took four hours and twenty minutes and was made through some spectacularly beautiful mountain country in the area of the Brooks Range.

A fine landing by the ski-equipped aircraft was made on the solidly frozen Hula Hula River, due west of magnificent Mt. Michelson and some 60 miles south of the Arctic Ocean. Our original plans were to attempt both Mt. Michelson and Mt. Chamberlin (9131 ft.), but only Michelson was climbed, due to an injury which I suffered on this ascent.

After the Tri-Pacer had taken off and left us in the lonely spot, the slow climb began toward Michelson, 16 miles to the east. At first we hauled some of the supplies on a small sled ("akio"), but this we soon gave up as too much work. Packs were then shouldered and the climb was resumed over exposed rocks and mushy snowfields. Snowshoes we left behind early in the trip as being too heavy, but this proved to be a mistake when patches of soft snow were later encountered.

The Arctic skies were clear during most of the expedition. On the first night we camped at about 4000 feet and witnessed a superb polar sunset of many colors. Our sleeping-bags felt mighty good during the night, when the temperature dropped within two

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JOHN P. THOMSON, a member of the Club and of the Alaskan Alpine Club, has been living since early 1956 in Fairbanks, Alaska, where he is on the staff of the *Daily News-Miner*. His companion on this trip, R. E. Isto, is a topographical engineer with the U.S. Geological Survey in Fairbanks.

degrees of zero Fahrenheit. April had been chosen for the climb in the Brooks Range because in that month it is still cold enough for the rivers and glaciers to be solidly frozen, making possible the landing of ski-equipped 'planes; also, the weather is more favorable than in the summer, when clouds settle in from the Arctic Ocean.

We located a base camp in the midst of a rock-cluttered plateau. This we left at about 10 a.m. on Tuesday, April 23, with a small pack. A mistake was made in not taking along extra woolen socks on this final assault, a mistake which to me was to prove costly.

As a whole the climbing was not technically difficult. Though the party carried crampons, there was no need for them or for ice-work. A nylon rope was used as protection over the glacier, which was about half a mile long and had a number of easily detectable transverse crevasses. The most difficult part of the ascent was the last pull up a rather steep (about 45 degrees) compacted snow wall for about 800 feet. The climb to the top took longer than we had anticipated and we did not arrive there until 9.30 p.m., just as the Arctic sun was dropping behind the northwest horizon. We had a magnificent, somewhat eerie view of the surrounding jagged peaks, some of which looked like the Matterhorn. But the chill of approaching darkness (about 10 degrees above zero) spurred us to descend. A crude cairn of rocks was constructed and a note placed inside with an orange cloth. Then we started down the mountain to the base camp, eight miles away.

The descent was made in the Arctic twilight and camp was finally reached at about 3.30 a.m. on Wednesday. Examination of my feet showed that several toes on each of them were painfully frozen. This had been caused by boots that were too tight and the failure to have extra socks along. Isto's feet were in good shape, though he too wore rubber-and-leather shoe-pacs.

Isto, with great enterprise, fashioned a pair of crude "mukluks" to replace my shoe-pacs, which were much too tight for my swollen and tender feet. The mukluks were made of a pair of nylon socks, two pairs of wool socks, one pair of inner soles, a bag cover, and portions of a suit of woolen underwear, with an outer cover cut from a poncho. Crude though they were, these mukluks kept my feet warm and dry on the slow and painful trek through snow and over rocks back to the Hula Hula River.

Here we spent several days resting in camp. Warmth was provided by a fire made of the only sizable growth in the area—willows. There was plenty of food and fresh ice-water from the river.

On the afternoon of Monday, April 29, we saw a tiny speck in the sky to the south. It was the Tri-Pacer, but the pilot only circled over quickly and then headed west. This was disconcerting; however the plane returned in half an hour and landed. Black explained that he had been confused by some rocks that had rolled onto the frozen river and had thought that they were a pre-arranged signal to go west to Lake Schrader.

Soon packs, sleeping-bags and other gear were loaded aboard and we took off for Fairbanks. Although I suffered some ill-effects for several weeks from my frozen toes, fortunately my only loss was two nails. But it had been a memorable experience in the little known and little climbed Brooks Range.

Plenty of signs of wildlife were seen, such as tracks and droppings of bear, wolves and sheep, but nothing was sighted except some small birds which were not identified. There are no roads into the Brooks Range, and the area can be reached only by foot, dogsled or plane. A round-trip from Fairbanks by chartered plane costs $200 to $250 per person. The climbing generally is probably not technically challenging, but the remoteness and grandeur of the country combine to make the Brooks Range a last frontier for those who love to conquer mountains.

KEARSARGE NORTH REGAINS ITS NAME

Arranged by MIRIAM UNDERHILL

THE NAME OF THE MOUNTAIN IN CARROLL COUNTY, N. H., northeast of North Conway, was for many years, particularly just after the Civil War, the subject of a controversy of serious proportions and great complexity, with many conflicting claims. Was it "Kearsarge" as the local inhabitants insisted? Or was it "Pequawket" as the partisans of that other Kearsarge in Warner, Merrimack County, would have it? These latter asserted, often with bitterness, that the northerners had no right to use the name, having stolen it from them in the most reprehensible fashion. One would suppose that they had never heard of the custom of naming one person, town or geographical feature after another, and of the honor this is intended to imply. We ourselves should be much interested to learn whether there is another case on record where the inhabitants of a place, the name of which—or of some feature of which—has been carried onward by pioneering settlers, have not been pleased by the circumstance, and regarded it as a tribute.

In the first year of its existence our Club became involved in this controversy at its very height and the intensity of feeling as the members took sides (according to Charles W. Blood) almost split the Club in two; it was a marvel that the Club survived! Mr. Blood also adds that, curiously enough, Professor Fay, the member who was to play the stellar role, started in as a Pequawket man. Later, as chairman of the committee of the A.M.C. appointed to investigate this question, he ended up a rabid Kearsarge man.

The matter seemed settled in 1878 when the U.S. Coast and Geodetic Survey adopted the name of Kearsarge North for the mountain, following the recommendations of this A.M.C. committee. It seemed settled once more, but on the other side, in 1915 when the U.S. Board on Geographic Names ruled that it was to be Pequawket. It was Malcolm Choate in 1956 who tossed the match into the powder magazine again. Delegated to go up to North Conway to gather material for an article on the mountain,

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This article is a condensation of a substantially longer report *On the History of the Name "Kearsarge" as Applied to the Mountain in Carroll County, N. H.*, prepared from material gathered by Malcolm C. Choate in connection with a "profile" of this mountain which APPALACHIA had asked him to write, and by Robert L. M. Underhill, and written by the latter. This was sent to the U.S. Board on Geographic Names to provide historical background for their consideration of a petition from the inhabitants of the surrounding regions that the name of the mountain be "Kearsarge North". A full copy of the report, available in the Club library, may be of interest to those who find any points in the present article to be too briefly treated.

he was greeted by the local residents as the man who was to restore the beloved name of Kearsarge to their mountain. At first glance this seemed a little outside his range, but as the months went on, not only Malcolm but the editors of APPALACHIA became convinced anew that in 1915 an injustice had indeed been done. If only Professor Fay could know that on September 6, 1957, the present Board on Geographic Names reversed the decision of 1915 and the mountain is once again Kearsarge!

From the very earliest days the settlers in Conway, Chatham, Bartlett and Fryeburg called the mountain "Kearsarge". Many of them had moved up there from the southern part of the state and it has been suggested that they named the new mountain for the one they had known before. There is no proof for this but many think it likely.

The earliest maps of New Hampshire gave no name whatever to this mountain in Carroll County. But in 1784 Jeremy Belknap, the celebrated first historian of New Hampshire, made a tour of the White Mountains. His party stopped for a visit at the home of Colonel Whipple in Jefferson, N. H., and there Dr. Belknap made a sketch-map, copied he says from one in Colonel Whipple's possession. On this map the peak is plainly marked "Kyarsarge", and this is the first record of any name being assigned indubitably to this mountain.[1]

The first time the mountain was called "Pequawket" was in 1816. In 1803 the New Hampshire Legislature had directed that a map of the state be compiled under the direction of the secretary of state, Philip Carrigain, by joining together the numerous separate town surveys, a very difficult proceeding. It was not published until 1816.[2] On this map the mountain is labeled "Pigwacket Mt., formerly Kiarsarge". This clearly amounts to a statement that the mountain had been known as Kearsarge, but that Carrigain was hereby lending his authority to a change of its name into Pequawket. Actually, it has been shown that Carrigain himself was making the change. G. V. Fox[3] went to the trouble of procuring copies of the town surveys of Chatham and Bartlett, the very surveys upon the basis of which Carrigain was supposed to construct his map. Each is dated 1805. On the survey of

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[1] Fay Report, APPALACHIA I, 153; Frank H. Burt, "Nomenclature of the White Mountains," APPALACHIA XIII, 364; both referring to the *Belknap Papers* published by the Massachusetts Historical Society.

[2] *Geology of New Hampshire,* by Charles H. Hitchcock, Vol. I, Concord, 1874, 232.

[3] G. V. Fox, *Facts about the Carroll County Kearsarge Mountain of New Hampshire.* Read before the Appalachian Mountain Club. Privately printed, 1877. An important pamphlet. Fox was the Assistant Secretary of the Navy during the Civil War.

Chatham the mountain is shown with the name "Keiersearge", on that of Bartlett with the name "Kereserge".[4]

That Carrigain should thus have taken matters into his own hands and arbitrarily altered a name which had been established in local usage since the settlement of the region, substituting one which had never been applied to the mountain before, may at first sight seem so strange as to be incredible. Certainly it is not the sort of thing that could possibly happen today—except at the hands of some bureaucratic official of a totalitarian government. But it must be remembered that democratic ideas had not as yet taken a very firm hold in this country at that early date, and the modes of procedure of the royal provincial governors and their appointees were still quite familiar. Carrigain was making the first detailed official map of the entire state; it was his business to straighten out irregularities between the different surveys themselves; and he may well have construed this authority as a license to adjust their nomenclature as well, when he thought it desirable. The presence in the state of two mountains with the same name may have offended his sense of order, and he proceeded to rechristen one Pequawket. It would have been a good name, had he been starting from scratch, as the mountain lies in the Pequawket country[5] (though not near the site of the main village), and is the highest and most striking peak of that region. But unfortunately it already had a name, and this obstacle could not be overcome under the authority actually given him. The local inhabitants have protested his act on this basis: "We know that Carrigain's map, published in 1816, falsified the town surveys it was compiled from by interpolating 'Pigwacket, formerly called' before the name 'Kearsarge Mountain' as found in the town surveys . . . but our people never adopted the 'alias' he volunteered to bestow, nor has the Legislature ever recognized it, as will be seen by inspecting the various acts and resolves in which the name of Kearsarge is always used for the Carroll County mountain. . . ."[6]

Carrigain made other changes from local usage on his map, notably in the case of the Merrimack River which formed an important landmark on some of the original grants to this region. In this instance Carrigain's innovation was eventually rejected by everyone.

But Carrigain's change of the name of the northern Kearsarge turned out to matter little, for nearly everyone, except for official maps and gazetteers, continued to use the original name of "Kearsarge". In the hundred years following Carrigain's map practically all the books, narrative and descriptive, which were written about the White Mountains by private individuals, who naturally felt themselves under no obligation to conform to any quasi-official model, employed the name which they found in use in the region itself. Thus we find "Kearsarge" in Oakes, Starr King, Drake, Ward and Packard, and both "Kearsarge" and "Pequawket" in Willey. These six are all the books listed as "classics" in the standard *Bibliography of the White Mountains* by Allen H. Bent[7] in which this mountain is mentioned at all.[8] The use of the name Kearsarge in the books independent of all official control suggests that this was the local usage; of this we have the strongest direct evidence as well.

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[4] Fox, 10; Fay Report, APPALACHIA I, 163.

[5] The Indians called the whole region along the banks of the Saco, where the tribe had lived for many years, "Pigwacket". This is now occupied by the towns of Bartlett, Conway and Fryeburg—this last being the site of the principal Indian village.

[6] Letter signed by twenty leading residents of Conway and Bartlett, reproduced in Fox, 11-12.

In Osgood's *White Mountains,*[9] the editor, M. F. Sweetser, printed the following paragraph in his successive editions:

> Judge Joel Eastman, of Conway, says: "All, from the oldest to the youngest, still call the mountain *Kiarsarge* throughout this section of the country, and any attempt to change its name will be futile. It will still go by the name of Kiarsarge until the Day of Judgment, and afterwards, if the memory of the things of this world remains after that day. . . . The people of Boston, New York and all the cities out of New Hampshire may call the mountain *Pequawket* and that won't alter its name, so long as its godfathers and the generations after them call it *Kiarsarge*." Judge Lory Odell says: "The new name given to this mountain by Carrigain more than half a century ago has never been adopted or used by the Pigwackets [people of Conway] at all. By them it is now and always will be called Kearsarge. They know it by no other name."[10]

G. V. Fox went to a great deal of trouble to collect evidence on this point, and gathered many letters from prominent residents of the region, including the selectmen of the towns of Conway, Chatham, Bartlett and Fryeburg.[11]

The following two pieces of evidence seem to represent local usage as sanctioned by the state Legislature:

(1) On July 14, 1864, the N. H. Legislature passed an act char-

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[7] Boston, 1911; Supplement, 1918.

[8] Our complete report contains four pages of discussion on "After Carrigain: Usage in Publications".

[9] Osgood's (later Ticknor's) *White Mountains, A Handbook for Travellers.* [By M. F. Sweetser.] Boston, 1876, and many later editions (15th in 1896). The most complete, detailed, and accurate ever published. The section on the northern Kearsarge is entitled "Mt. Kiarsarge or Pequawket", but in the text only "Kiarsarge" is used, the editor saying that he has adopted this name "because of its strong local tenure".

[10] P. 85, all editions.

[11] Fox, 11-17.

tering a road from Kearsarge Village in Carroll County to the top of Kearsarge mountain. In this act "Kearsarge" is used six times.[12]

(2) In 1883 the Legislature passed an act "to incorporate the North Conway and Mount Kearsarge Railroad"; date of approval by the governor, etc., August 7, 1883. In this act the mountain is twice called "Kearsarge", and never anything else. The company was organized on May 1, 1884, and in a prospectus then issued the mountain is called "Kearsarge" seven times, and never anything else. (We have ourselves seen a certified copy of the Act, and a copy of the prospectus.)

For about 100 years, therefore, from the time of settlement until the Civil War, the fact that there were two mountains in New Hampshire named "Kearsarge" apparently caused no confusion or difficulty. But when the brilliant victory of the cruiser *Kearsarge* over the Confederate raider *Alabama* took place on June 19, 1864, Kearsarge became a famous name, and so its possession something to quarrel about. At once the inhabitants of the regions around each Kearsarge, the southern and the northern, firmly believed and asserted that the ship had been named for their mountain.

As to which mountain the ship *had* been named for, there was much to be said for both, but the conclusive evidence comes from Gideon Welles, who was Secretary of the Navy at the time the ship was built and commissioned, and who had the authority for the naming of all such ships. He liked the name "Kearsarge" and understood that there was a mountain in New Hampshire by that name, but he had not himself known that there were *two* mountains. However, he had delegated the privilege of naming this ship to Mrs. G. V. Fox, wife of the Assistant Secretary of the Navy, who had intended the northern Kearsarge. In answer to a letter from Judge Lory Odell of Portsmouth, N. H., Ex-Secretary Welles wrote: "Only Mr. Fox and his wife were consulted in the matter and she, familiar with New Hampshire mountains and scenery, is entitled to the honor and credit of deciding the question."[13]

The official view of the United States Navy is that the original sloop *Kearsarge* was named for the northern Kearsarge. There is at present in commission the third ship of the name Kearsarge, an aircraft carrier, and in the program of the commissioning ceremony it is officially stated that the original *Kearsarge* was named for the mountain in Carroll County.[14]

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[12] Fox, 11. The implication is that the name Pequawket is not used at all but not having seen a copy of this act we cannot assert this definitely.

[13] Fox, 16-17.

But at the time these facts were not widely known and the southerners too had reasons for believing that the ship had been named for the southern mountain. Feeling between the partisans of the two mountains ran very high indeed. The southerners claimed that the northerners had "stolen" their name, and had no right to use it. They wanted the name taken away from the northern mountain. No one denies, of course, that the southern mountain, lying in that part of the state which was settled earlier, was the first to be named "Kearsarge", but this does not constitute agreement with the southern contention that this fact gives the southerners the *exclusive* right to the name.

In 1876 E. T. Quimby, head of the U.S. Coast and Geodetic Survey, asked the Appalachian Mountain Club to examine the question of the "true name" of the mountain in Carroll County, N. H. From this request resulted the first methodical inquiry into this matter. The committee, headed by Professor Fay, in 1877 brought in a report which concluded that "there are two mountains in New Hampshire which at present bear the same name, Kearsarge; that . . . the name is equally the original name of both, and handed down by unbroken and reliable tradition; that another name, Pigwacket . . . has also been quite frequently applied to the Carroll County mountain since 1816 [the date of Carrigain's map] . . . and in virtue of this must be considered *a* name for the same, although the other seems to have over it the advantages of priority and especially of general local usage."[15]

In 1878 the Coast and Geodetic Survey adopted the name of "Kearsarge North" for this mountain, a name which has been subsequently used with some frequency when it was necessary to distinguish between the two mountains.

The New Hampshire Historical Society, most of whose members came from Concord, N. H., and all but one or two of whom lived much nearer the southern Kearsarge than the northern, disagreed with the conclusions of the A.M.C., and prepared a report of their own. The committee in charge of this project was headed by the Rev. Dr. Nathaniel Bouton, corresponding secretary of the Society and State Historian. The following letter, written on May 7, 1877, to the A.M.C., is revealing:

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[14] The launching was in fact attended by Mrs. Leah Gray, of Kearsarge Village, Carroll County, and through her we have obtained a view of the printed program issued for the occasion.

[15] Professor Charles E. Fay (1846-1931) of Tufts College, the chairman of the committee in question—and editor of APPALACHIA, 1879-1919—was a man of the very first distinction in American mountaineering circles. The report, written by himself, is one which, we strongly feel, should be read in the original and in full in order that the great care expended upon it and the impartiality of its governing attitude should be adequately appreciated. The report was submitted to the Club at the meeting of November 14, 1877, and accepted. In the MS. records of the meetings of the Club there is further recorded a vote that "the thanks of the Club be given to the Committee . . . for its exhaustive and painstaking report, and that the Club recognizes the clearness and fairness of the explanations and the eloquent manner of presenting the report by Prof. Fay as chairman".

> ### AN HISTORICAL CHALLENGE
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> Though I am not much of a fighting character, yet I offer this challenge. First, to Capt. G. V. Fox, and second, to all members of the Appalachian Mountain Club, viz:
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> If he, or they, or any person in the world, will furnish a single reliable proof, that the country including Conway and Fryeburg was ever known or spoken of, previous to 1775, by any other name than the *Pequawket* Country; or that any mountain in that region was ever known or called "Kiarsarge" previous to 1770, or previous to the settlement of those towns by people mainly from towns in Merrimack Co., N. H. (about 1766-1770), or that the name "Kiarsarge" is found on any map, book, grant or deed or applied to the mountain in that section previous to 1770. On that, then, I will concede the propriety of adhering to that name; otherwise, the dispute shall end and the "peerless Kearsarge" in Merrimack Co. shall alone stand crowned with the glory of its ancient name.[16]

This letter, we observe, besides displaying an intensity of feeling quite out of place in anyone deputed to conduct a dispassionate factual investigation, likewise shows a major confusion of the issue in Dr. Bouton's mind. He is assuming that the prior claim of the southern mountain to the name Kearsarge is the same as its *exclusive* claim to that name. The Appalachian Mountain Club did not deny—in fact, it asserted—the prior claim, based upon clear evidence; but it held that further and different evidence was necessary to establish the exclusive claim. (If the prior use of a name does in fact give exclusive right to its use then I, who live in Concord, Mass., and find that much of my mail goes to Concord, N. H., would like to have the name taken away from that recent upstart!)

In this connection and at other times the partisans of the southern Kearsarge have claimed that the original name of the northern mountain, even before the settlement of the region, was "Pequawket". That it was the Indian name, or that the Indians had any name whatever for the mountain, has been strongly denied by George Hill Evans in a little book entitled *Pigwacket,* published by the Conway, N. H. Historical Society in 1939.

As for the white men who had visited the region in the early 18th century, on trips of exploration or Indian-fighting raids, only one, Samuel Willard, has left any written reference to a mountain called "Pequawket". In his journals for the year 1725 he twice mentions "Pequawket Hill", once on July 31 as having seen it from Monadnock (which could have been true of the northern Kearsarge or of several other mountains in the same direction); and again on October 6: "We marched down ye River about 20 mile to ye place where Capt. Lovel first came upon Sawco River 2 days before his fight at ye mouth of a stream which he followed from Pigwacket Hill."[17] Professor Fay made a careful determination of the route which Capt. Lovewell undoubtedly followed in his expedition of April, 1725, the expedition which led to the famous engagement known as Lovewell's Fight. We definitely know that Lovewell approached the Saco River from the south via Ossipee Lake. From Ossipee Lake the regular route to Pigwacket (the Fryeburg region) was northward past Silver Lake, upstream past a string of small ponds, over a low divide and then down along Pequawket Brook to the Swift River just before it enters the Saco at Conway; thence down the Saco to Fryeburg.[18] We have every reason to believe that Lovewell took this course.[19] We now come to the quotation from Willard. This is from the diary of a scouting trip up the Merrimack and Pemigewasset, east across country to the Saco, and down the Saco to the coast. The entire diary has been printed in APPALACHIA II, 336-44, and an attempt made to determine the route followed in detail. This is not easy, but it seems most likely that Willard followed up the Hancock Branch of the Pemigewasset and thence crossed the divide eastward to the head of the Swift River, the chief branch of the Saco in this region.[20] "Ye River" of the quotation, which the party is said to have marched down, would then be the Swift (at that time considered the main stream of the Saco); and on this river they came to the point where Lovewell also first met it, coming up from the south, namely, at the confluence of the Swift River and Pequawket Brook. (To make the quotation clear and meaningful throughout, it is necessary to bracket in commas the phrase "2 days before his fight".) But this point was "at the mouth of a stream which he [Lovewell] followed from Pigwacket Hill". What the quotation gives us, then, is the statement that "Pigwacket Hill" lay to the south of the Swift River, up toward the headwaters of Pequawket Brook. But the northern Kearsarge lies well to the north of Conway, in the opposite direction from Lovewell's line of approach. Therefore, it could not have been Pigwacket Hill.[21] This simple but sufficient argument has not only never been refuted, it has never been seriously challenged.

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[16] Fox, 15.

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[17] APPALACHIA I, 154, referring to Massachusetts Archives, 38A, 119.

[18] Evans, *Pigwacket*, 29-33. See the U.S.G.S. Ossipee Lake quadrangle. From Silver Lake to Conway this natural, low-level route is that now taken by the railway.

[19] Evans, *Pigwacket*, 58-9, 62-3.

[20] APPALACHIA II, 337-8. This is a natural route and the one now being taken by the new Forest Service road from Lincoln on the Pemigewasset to Conway on the Saco.

What, then, was the mountain here referred to as "Pigwacket Hill"? This is a question which we do not really need to answer, except to show that, aside from what has already been said, there is another and far better candidate than the northern Kearsarge. Nine years later, while reasserting the reasons against supposing that Willard's Pigwacket Hill could be the northern Kearsarge, Professor Fay suggested that it might very well indeed be the present Mt. Chocorua.[22] Chocorua lies just west of the source of Pequawket Brook. Situated on the southern outskirts of the Pigwacket country, and close beside the regular route which led thither from the Massachusetts border, it would deserve a name, as a prominent and useful landmark, at the time when practically no individual peaks north of the settlements were honored with such. (The northern Kearsarge on the other hand, situated in the northern part of the Pigwacket country and beyond most of the villages, where the ranging parties seldom ventured, would be of no use as a landmark for their purposes and undeserving of a name. It does not even mark the site of the main village, at Fryeburg.) In favor of Chocorua's claim to the title of Pigwacket Hill may be noted the ancient name of Pequawket (earlier Pigwacket) Brook itself, which rises just to the east. The little settlement between the head of this stream and the mountain, and precisely at the east foot of the latter, bears the name of Pequawket village (U.S.G.S. Ossipee Lake quadrangle), but the tradition of how or why it got its name has now been lost.

Chocorua is visible from Monadnock, in practically the same direction as the northern Kearsarge (that is, within the allowable margin of error according to Willard's means of observation), and much more prominently. The Chamberlain panorama shows that, looking northeast from Monadnock, the four most prominent mountains are the southern Kearsarge, Mt. Sandwich in Waterville, Great Ossipee and Chocorua. All of these, and the last two in particular, were important landmarks on the route north to the Pigwacket country. They were at once what was most striking to the eye and what was most interesting to Willard's mind. It would have been very strange indeed if, overlooking Chocorua, he had singled out for mention the northern Kearsarge, which in comparison was small, distant, and scarcely distinguishable among a welter of others, while at the same time of no practical importance to him as a ranger.

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[21] APPALACHIA I, 159.

[22] APPALACHIA IV, 322-7.

Through the years following 1878, when the U.S. Coast and Geodetic Survey adopted the name "Kearsarge North" for their maps, the controversy still continued, often with considerable animosity but with no definite action until 1914. On December 26 of that year Senator Jacob H. Gallinger of New Hampshire wrote a letter, later printed in Senate Document 307 (Vol. 41 of Senate Documents, 64th Congress), to the U.S. Board on Geographic Names asking that they consider the matter of the two mountains in New Hampshire called "Kearsarge", of which the southern "is near my summer home at Salisbury Heights, and I feel much interest in the name". This introduction is not one which strikes a neutral reviewer as fortunate. The Senator continues: "Of late years a mountain in North Conway is also made to bear the name of Kearsarge. As I recall the matter, the Conway mountain once went by the name of Pequawket." This statement is inexact. It was only in late years (since the publication of Carrigain's map) that it began, occasionally, to bear the name "Pequawket". The Senator also said that "manifestly the two mountains ought not to bear identically the same name".

If this matter is "manifest", White Mountain nomenclature has been and still is in a very bad way indeed. In 1949 the New Hampshire State Planning and Development Commission published a booklet entitled *The Mountains of New Hampshire, A Directory Locating the Mountains and Prominent Elevations.* "We have endeavored," says the preface, "to include all elevations listed on the quadrangle sheets of the United States Geological Survey." From this booklet we learn that, omitting all elevations going by the name of "Hill" and including only those called "Mount", "Mountain", or the equivalent, there are:

29 cases in which the same name is used twice;
10 cases in which it is used three times;
3 cases in which it is used four times;
3 cases in which it is used five times;
1 case in which it is used six times;
1 case in which it is used seven times; and
1 case in which it is used ten times.

Most of these cases, to be sure, involve such commonplace names as Bald, Black, Bear, etc., Mountain, but there are two cases each of the following names: Barber, Gardner, Moody, Parker, Piper, Rice, Shaw, Webster and Willard; and three cases each of Pisgah and Smith. Now, Kearsarge no doubt is more distinguished both as a mountain and as a name than any of these, and therefore one may be inclined to hold that in this case it is important to make a distinction which may be neglected in others. But for the very same reason it is likewise important to give special attention to the injury done when a name of such valued character is removed. We are simply urging the very obvious point that, in place of Senator Gallinger's general proposition, everything depends on the particular case.

Looking back now it seems to us that the Board of that day put too much reliance on the Senator's statements, and decided this question without taking time for the thorough investigation in the field to determine local usage, which is one of their strong guiding principles at present. But we must remember that this occurred in wartime, when people were concerned with urgent matters, and after all, may one not properly assume that a senator represents his whole state and not a segment of it? In any case, on January 6, 1915, the Board decided that the mountain in Merrimack County should be Kearsarge and the mountain in Carroll County should be Pequawket. Charles W. Whitaker of North Conway told me, "I'll never forget that day. How sad everybody looked. I'd rather they'd taken away my own name and called me something else, and left the right name of the mountain."

When considerable protest—some of it from members of the A.M.C.—arose over this decision of the Board, Hildreth, one of its members, prepared a report to justify the action. Our full report discusses the Hildreth report in some six pages.

Since 1915 the inhabitants of the region have been as staunch as ever in clinging to their name "Kearsarge". One old-timer told Malcolm Choate that once on the Hurricane Mountain Road he had met an A.M.C. party who asked to be directed to the start of the trail up Pequawket. "I told them," he reported, "that there wasn't any such mountain around here. Of course if they'd said 'Kearsarge', I'd have told them they'd just walked by the trail a hundred yards back."

When, after forty-one years APPALACHIA took up the question of this mountain again, the local residents gave help by offering, in more than one hundred communications, family records, old clippings, etc., which were of great value in preparing our analysis. They also, of course, circulated the petition which was eventually forwarded to Washington.

On September 6, 1957, the present U.S. Board on Geographic Names reversed the decision of 1915. After a thorough reconsideration of the case and a visit to the region by Dr. Meredith F. Burrill, Executive Secretary of the Board, Dr. Burrill notified the people of the region that the Board had approved their petition that the mountain be called "Kearsarge North". At the same time Dr. Burrill wrote to APPALACHIA, "We owe you and your colleagues a real debt for digging out the facts and bringing the matter to our attention."

VARIOUS NOTES

Members and friends of the Club are urged to contribute items and pictures along the lines of the Club interests suitable for inclusion under this heading. Material for the June issue should be received not later than March 15, 1958. All copy should be typewritten, double-spaced.

ALPINA

In the Himalaya activity was apparently somewhat restricted by the licensing and tax requirements of the Nepalese government. Dr. Charles Evans and Dennis P. Davis were successful in an attempt on Annapurna IV (24,688 ft.), but were stopped by bad weather just short of the summit of Annapurna II (26,041 ft.). A five-man British party under Major James O. M. Roberts made the ascent of Mache Puchare (22,985 ft.)[1] in central Nepal. In the Karakoram Range, an Austrian Alpine Club expedition composed of Hermann Buhl, Kurt Diemberger, Markus Schmuck and Fritz Wintersteller made the ascent of Broad Peak (26,440 ft.) on June 9. A few days later Buhl was killed by a fall from Chogolisa and his body was not found. (See under ACCIDENTS.)

In the Andes there was considerable activity this past summer. A German expedition sent out by the Sektion Schwaben, in Stuttgart, of the Deutscher Alpenverein, under the leadership of Günter Hauser, visited the Cordillera Blanca, where they climbed Pyramid Garcilaso (19,400 ft.) and three other peaks over 18,000 feet.

A British group from Cambridge University were in the Cordillera Vilcabamba of Peru, where they succeeded in climbing Pumasillo (20,490 ft.).

The Harvard Mountaineering Club party composed of William Hooker, Earl Whipple, Craig Merrihue, Michael Wortis, Casper Cronk and Steven Jervis climbed ten peaks, in the Cordillera Vilcanota, between 19,000 and 20,000 feet, nine of them first ascents. An attempt on the northwest ridge of Ausangate failed, due to lack of time.

Another American party, composed of Thomas McCormack, Rodman L. Tidrick, Nicholas B. Clinch and Virgil R. Day, were in the Cordillera Blanca, where Tidrick and Clinch made the first ascent of Nevado San Juan (about 19,000 ft.). The route was long, so that they had to bivouac 500 feet below the summit, but suffered no harm, thanks to their down clothing.

An Austrian Alpine Club party, in the Cordillera Huayhuash, reached the top of Yerupaja Chico (20,085 ft.). After a failure by one route, they accomplished the ascent of Jirishhanca (20,100 ft.), the highest unclimbed mountain of either American continent.

Glaciological Research in the Arctic was carried on at various points during the year. The Juneau Icefield Research Station was occupied during the summer. A party spent considerable time making observations on the glaciers in southern Alaska, in the Kenai, Chugach and

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[1] This name is variously spelled (see for instance the article by Wilfrid Noyce earlier in this issue).—ED.

Wrangell mountains and in the Alaskan Range. A new glacier research station was established on the McCall Glacier in the Brooks Range of northern Alaska, and the U.S. Army continued its Greenland research program.

The Antarctic bases for the observations during the International Geophysical Year have now been established and manned. Very considerable work has already been carried out, but the only tangible result to date appears to be the shaping up of a theory that the Antarctic continent is perhaps not a continuous land mass, all above sea-level, but rather a series of large islands. Some of the glacier soundings for thickness indicate that the ice goes considerably below sea-level. Further observations will be necessary in order to delineate the low areas and to assess the results with accuracy.

KENNETH A. HENDERSON

Alaska, Mt. McKinley Range. In late June, Adams Carter, Roger Dane and his wife Lee, Tom Boeschenstein, Barrett Morgan, Francis Blake Jr., James M. Estabrook Jr. and Douglas Bingham packed along the side of the Muldrow Glacier to a base camp at the foot of Anderson Pass, in Alaska's McKinley Range, for a month's climbing. This was an extraordinarily young party. Excluding Carter but including the two Harvard graduate students, Dane and Boeschenstein, the average age of the group was still in the teens.

The weather did not particularly favor them. From a high camp above the Muldrow and below Mt. Mather, Carter and Dane reconnoitered a route to just below the summit of an intervening 10,000-foot mountain. (They avoided climbing to the top in order not to rob the rest of a first ascent.) From that point there seemed to be no insurmountable difficulties between them and Mather's peak. The weather turned worse and they were stormbound there for four days, before lack of food forced them back to Base Camp. They did make several first ascents, the most interesting one being Peak 8620, just south of Anderson Pass. Bad ice conditions on a very steep ridge made them spend six hours on a 1000-foot pitch.

In the second half of July Carter's wife Ann and son Nat joined them for climbing and photography on the opposite side of Mt. McKinley.

Information from ADAMS CARTER

CLIMBING IN GENERAL

The Bulge and the Horn. Anyone who has climbed the fire-tower on Mt. Cabot will have noticed to the north, and within two miles, two prominent peaks, the Bulge and the Horn. Both of these are over 3900 feet and the Horn, the farther one, has a bare, rocky top.

This fall, on an A.M.C. trip to Cabot, several of us were interested in making the trip to the Horn, despite somewhat threatening weather. Leaving the true summit of Cabot, which is one-third of a mile north of the tower, we made a beeline toward the Bulge, descending rather steeply in fairly thick spruce and among the usual blowdowns. At the low point of the ridge we passed through a rather extensive area of low bushes, allowing views of the peak ahead and of the tower back of us on Cabot. The summit of the Bulge was reached with little difficulty, but found to be heavily wooded and viewless. The remainder of the route to the Horn was easy. The woods were more open, and following the crest of the ridge there appeared to be the remains of an ancient trail, along which we made rapid progress. The final bit of ascent was in the open and the rocky summit is as sharp as any to be found elsewhere in the White Mountains. The view, of a little known region, was interesting. To the north of us and at our feet was the long, deep valley of Mill Brook, and to the northeast lay Unknown Pond and a nearer, smaller pond over which could be seen the sheer cliffs of Nigger Nose. Distant views were obscured by thick haze, and as a few drops of rain began to fall we did not stay long, but dropped quickly down the cone onto the prominent southeast ridge. Here we found beautiful going in open hardwoods. We gradually slabbed down into the valley, reaching the Unknown Pond Trail, which is in excellent condition. This we followed out for a mile or so to the York Pond Road, a couple of hundred yards from the end of the road where our cars were parked. The time from the summit of Cabot was less than three hours. I do not recommend the Bulge especially, but a trip to the Horn, utilizing the Unknown Pond Trail, will prove to be an easy and very profitable short day.

Walter C. Merrill

Sugarloaf Mountain in the Benton Range appears in the A.M.C. *White Mountain Guide* with the notation that information is desired on any trail to its summit.

Several years ago a group from Camp Wynona blazed a trail, which eventually reached the area where ladders had been erected along what was presumed to have been the original trail, then out of use for many years. On July 22, 1957, our advanced hiking unit re-mowed and remarked the trail, which is in fairly good condition. A description of the route is given below.

Follow the Lime Kiln Road to its end and there turn left. The route begins on the left side of this road, to the right of a green house about one-half mile down. A narrow dirt road leads to a cow pasture. The blazes are white. At the far end of the pasture the trail turns right, along a cowpath, through the woods to an upper pasture. It follows along the right side of the pasture, turns sharp right across a brook, and slabs rather steeply through the woods, coming out in a high pasture. It cuts straight through the middle of the pasture, turns sharp right at a large overhanging rock, continues through the woods, through an area of blown-down pines, and emerges at the foot of the ladders. From here the old trail is well marked and obvious to the summit.

The ladders definitely need repair.

Elizabeth Thorndike, *Camp Wynona*

Jackson Revisited. Jackson, New Hampshire, seems to be losing its popularity as a climbing center, to judge from the fact that many of its trails are being abandoned—i.e., the East Pasture Trail, the Stairs

Col Trail, and others on Iron, Thorn and Black mountains. We have, however, found great pleasure in walking a number of the old Jackson paths during the last several years, and should like to re-introduce a few.

The East Pasture Trail may easily be followed beyond Whitneys' up the Black Mountain Road, then along beside high pastures with their magnificent views to the south and southwest. After about a mile and a half, where the path climbs to the west up the slopes of Black Mountain, the Chatham ranges unfold behind you to the east and southeast: Sable, Chandler, Kearsarge North and others.

In April of this year, when the snow was still deep in the woods, we walked up the West Pasture Trail from the Carter Notch Road for a morning's excursion, and found the views of Mt. Washington in its snowcover particularly inspiring all along the way. The West Pasture Trail connects with the East Pasture Trail at the top of the Black Mountain ridge, where a few steps to the north will bring you to the site of the old Davis Tower, from which there is now no view at all. It is a pleasant circuit walk up the East Pasture and down the West, with the view of Washington as the *pièce de résistance.*

The Iron Mountain Road is another worthwhile walk, although if you own a backroads jeep you can probably make it up to the Hayes Farm at the height of land the easy way. From the top, the scene spread out to the west includes Carrigain and other peaks bordering the Pemigewasset Wilderness, with the Giant Stairs looming nearby. The abandoned Stairs Col Trail to the Rocky Branch pitches down to the west from here, passing through the hidden remains of a long-abandoned farming settlement.

For some time Prospect Farm has been on our list of Jackson jaunts, so this past April we decided to walk to it from our headquarters on the Carter Notch Road. We continued along this to the point where the Bog Brook and Wild River trail-marker pointed north on a lumber road. Here we turned left and west on the old Prospect Farm roadway. Passing through a fine grove of evergreens, balsam and spruce, and wallowing knee-deep in snow in many places, we finally emerged into the scenic pastures where one looks straight up into Carter Notch. From the pastures on the south side of the road, the broad bowl formed by the Black Mountain ridge and Perkins Notch made an impressive sight. There is much evidence of deer and bear in the vicinity, the trail signs bearing the telltale claw-marks. An abandoned trail to Hall's Ledge is found in the southwest corner of the clearing and may be followed if care is used. We followed traces of this trail for a half-mile or more, finding it hard going where the snow was deep. The outlook from Hall's Ledge is toward the west and Mt. Washington.

Before we leave Jackson and its walks let us mention a charming little spot right in the heart of Jackson village itself. Drive your car along the north side of the cemetery and then walk across the fields to the northwest corner of the clearing, where a wood road leads in a few hundred feet to Mirror Lake, a wild little tarn much enjoyed by Jackson walkers of years gone by. In fact, to get the real feeling of trips in this area we recommend finding a copy of *A Guide to Jackson,* *New Hampshire, For Those Who Walk,* by Ralph C. Larrabee, published by the A.M.C. in 1927. Many of the walks suggested in this little booklet are still as "bully" as the author says they are!

John and Laura Saunders

The Four-Thousand-Footer Club. The formation this year of the Four-Thousand-Footer Club has proved to be a great incentive for a lot of people to get out and climb. People who year after year have been climbing the old standbys—the Presidentials and the Franconias—have found new enthusiasms and discovered new country by participating in the "Four-Thousander" trips sponsored by the General Outings Committee. At this time the statistics are not complete respecting the total attendance of this year's camping and A.M.C. hut trips, but the increase over last year will be quite substantial. For example, our first Four-Thousander trip was in May to Mt. Hancock, with forty-six in attendance. Our annual average attendance on camping trips in 1956 was fourteen. In September, forty-one A.M.C. members reached the top of South Hancock, a trailless climb, and everyone enjoyed the trip. Incidentally, on this climb seven more persons qualified for the 4000er shoulder-patch with the usual pleasant, and perhaps to become traditional, ceremony. At this writing nineteen candidates have qualified and are ready for election later this year, and many more are closing in on that coveted 47th summit.

This year, in conjunction with the Range Walk and the Annual Fall Hotel Week, the General Outings Committee has run trips to practically every 4000-foot peak in New Hampshire, including the trailless peaks of West Bond, Hancock, South Hancock and Owl's Head. In the future, also, it will be the policy to run as many trips as possible to cover all the high peaks in the White Mountains. And if some of our bushwhacking routes become trails by use, we can always try a new route.

Walter C. Merrill

At the time of going to press the following have qualified for membership in the Four-Thousand-Footer Club:

Nathaniel L. Goodrich, *Honorary Member* (Deceased).
1934, September. Francis B. Parsons.
1957, May 26. Roderick Gould.
Sept. 2. Thomas M. Lamb.
Sept. 14. Miriam Underhill, Robert L. M. Underhill.
Sept. 21. Kornel Bailey, Marjorie Healey, James L. Marston, Walter C. Merrill, Donald G. Mitchell, Barbara L. Richardson, Albert S. Robertson.
Sept. 23. Percy L. Prescott.
Oct. 12. Philip Dickerman.
Oct. 13. Ralph Edwards, Harry C. Hall, Connie Procopio.
Oct. 14. Louise Baldwin.

Walking Trips in Europe. The Ramblers Association, with a membership of about 14,000, is primarily concerned with the preservation of English footpaths and the maintenance of access rights to English mountains, moors and shores. The affiliated Ramblers Association Services, Ltd., is a limited-profit travel organization which arranges holiday and vacation trips to the European continent. These are classed from Grade A, "large proportion of walking above snowline, across glaciers and along snow and rock ridges," through Grade C, "several strenuous days and occasional walking up to seven hours, with hiking boots essential," down to Grade E, "generally sightseeing tours, with walking incidental but a few optional rambles on free days." These trips are from ten to twenty-three days in length and range from sightseeing in Vienna at Easter to tramping in the Norwegian mountains in August, and from a walking tour through the forests of Luxemburg to a Grade A schedule for climbing seven mountains via five Austrian huts.

For both 1956 and 1957 there were scheduled 56 trip itineraries with over 160 parties. Almost 100 of these might be classified as mountain trips, 13 as other walking trips, and the remainder as including sailing, camping, canoeing and other types of holidays. About one-half of the mountain trips are arranged for one or two centers—either spending two weeks in a single mountain village or a week at each of two such villages (such as Ried and Zermatt in Switzerland). On over 35 of the mountain trips, stays at three different villages or mountain huts are scheduled. The changes in location are made variously, by walking trips or by bus and train.

The start from London, with the leader, is generally on a Saturday, with travel by second-class train on the continent. However, arrangements can be made to join the party in Basle or Geneva. On the "center" trips, daily walks with the leader are scheduled to mountain summits or passes or other objectives, as time permits. At these centers accommodations are in local pensions or small inns, with meals at local cafes. At some mountain huts meals are served, but for others the party carry their food and may have to prepare it.

The Ramblers' parties vary from 12 to 20, with a maximum limit of 25. Few bookings are accepted from women until a reasonable number of men have registered for a party. (This is supposedly a limitation peculiar to the Ramblers.) The trip booklet carries a warning not to book too strenuous a trip. It is reported that in the past some people have assumed that a statement of "up to seven hours' walking a day" means seven miles. There is a difference.

The writer has taken one of the Ramblers' "C" trips, which began with a Sunday daylight train trip from Basle to Brigue in the south of Switzerland. The first week was spent at the small, mile-high village of Saas Almagell, near the head of the valley next to Zermatt. The party of 12 stayed in two apartments in a new chalet and ate across the street at the Edelweiss Cafe: continental breakfasts, substantial trail-lunches and dinners, remarkably good for mountain trips. Since the party was small, everyone went on the daily walks up the nearby valleys and passes, with the leader. A shift was made by bus and train, on Saturday, to Ulrichen. From here Corno Pass and the Swiss Corno Hut were reached by an eleven-mile walk. This six-hour walk was the longest required to reach a bed. Two nights were spent at the Italian Città di Busto Hut, across the Gries Pass in Italy; one night at the Maria Luisa Hut; two at the Swiss Basodino Hut; and the last night at the Cristallina Hut. Where two nights were spent there were optional walks up glaciers to the Blindenhorn and Basodino Peak—seven-hour and eleven-hour trips. The Italian huts served all meals. By special arrangement the guardian at the Basodino Hut had food packed in and prepared it. For the other two huts the party brought and prepared their own meals. Saturday morning was the end, with a four-hour walk to Airolo and the railroad.

Such an excursion is an excellent way to have a walking trip under competent leadership and secure a view of varied and spectacular mountain scenery. Some of the trips are repeated year after year, and others—like this one—are re-scheduled only irregularly. This trip cost about £39 from London to London, or £29 ($82) from Basle to Basle.

The Ramblers' Secretary has written that he desires to have these tours known in the United States. The address is Ramblers Association Services, Ltd., 48 Park Road, Baker Street, London N.W.1.

Similar trips are also given by two other limited-dividend societies: C.H.A. (Cooperative Holiday Association), Cromwell Range, Manchester 14, England, and the Holiday Fellowship, 142 Great North Way, Hendon, London N.W.4. These societies together list over 400 parties to the Continent, with a smaller proportion of mountain trips and a greater number of miscellaneous trips and bus tours than is the case with the Ramblers.

Alan C. Rockwood

SKIING

The Wildcat Mountain Development.—A major ski area is taking form on the north slopes of Wildcat Mountain, about half a mile from Pinkham Notch towards Gorham. Two trails have already been cut and seeded so that they will be skiable on four inches of snow. One is made up in part of the old Wildcat Trail, widened so that it will be suitable for somewhat less expert skiers than formerly. The other is on the ridge to the east of the towline. Tow facilities this winter will consist of a T-bar lift with a slope about 2,000 feet long, from which the lower parts of the trails will be accessible. The "bubble"-type enclosed lift will probably not be ready until spring, but it will run to the top of the ridge, connecting with the tops of the trails. The buildings will be partially constructed this year and they will house eating, ski-rental and other facilities. Manager of this area will be Bill Boardman, formerly at Laurel Mountain, Ligonier, Pennsylvania.

Philip A. Davis, Jr.

Airlifts for skiers have become familiar in Switzerland during the past two seasons. On March 25 last the London *Times* printed a dispatch from its Geneva correspondent stating that "the well-known flier Herr Geiger carries skiers in his Piper from Kleine Scheidegg to Ebnefluh or to the Petersgrat almost every day. Skiers are often flown, too, to the Theodule Pass (10,800 ft.), from where they ski down to Breuil in Italy, ascend again to the Theodule by the Italian cable railway, and make the descent to Schwarzsee across the Theodule glaciers." The same sort of thing seems to be going on at other winter sports centers besides Grindelwald and Zermatt.

The pilot Geiger is primarily active in rescue operations, and reports of his spectacular work in this line are constantly coming in. (For instance, on Sunday, April 21, he picked up and brought down to safety, within an hour of each accident's being reported, no fewer than seven persons, from four different localities such as the Theodule Pass.) Others have followed his example. But now these pilots have discovered that, when not engaged in effecting rescues, they can turn their skill to considerable pecuniary advantage by carrying skiers up to the high glaciers and snowfields, for powder-snow runs off the beaten track; and the high-class hotels are doing their best to develop this air-taxi service. Some of the Swiss, however, are up in arms. A writer in a Zurich sports magazine, quoted in *Der Bergsteiger* (June 1957, 119), declaims against what he calls "a further profanation of the mountains and a great stride in the degradation of skiing and mountaineering"; unless it is stopped "our mountain country will increasingly become the playground of a minute number of snobbish air-taxi skiers who, for their special and exclusive enjoyment, will spoil the winter-holiday pleasure of ten thousand who are out seeking recreation". What this writer says he objects to is the unescapable noise incident to the operation; railways and ordinary lifts are stationary, and you can get away from them, but the racket caused by aircraft is omnipresent and unendurable. There may indeed be something in this, but it seems clear that what the man really resents is the fact that this new type of lift opens skiing opportunities to the few which are denied to the many—a drawback which every commercial aid to skiing has always had, and no doubt always will have.

The Central Committee of the Swiss Alpine Club has addressed a plea to the Federal Air Bureau to regulate this business on the far more reasonable ground that it may result in depositing, high up on the mountains, skiers whose skill and equipment are inadequate for descents over alpine terrain, thus necessitating rescue operations which will burden the S.A.C. outfits. They therefore ask that pilots undertaking this service be made responsible for the proper equipment of their passengers, and obligated to rescue them in case of need. (*Die Alpen,* August 1957, 176.)

But an individual editorial writer in *Die Alpen (ibid.)* echoes the complaint about the noise. Says he, "It is not at all necessary for us to 'Americanize' ['veramerikanisieren'] our sublime mountain region. Somewhere a man must be able to feel himself far away from the noise and commotion of cities and to enjoy peace and quiet undisturbed." Here, it seems, is one respect in which we (along with other foreigners) have managed to "Americanize" Switzerland before we have made much progress in Americanizing our own country.

Robert L. M. Underhill

CANOEING

Rapid River, Maine. The Rapid River, flowing from Lower Richardson Lake to Umbagog Lake in the Rangeley Lake region of Maine, is of special interest to white-water enthusiasts. The principal feature of this river is its steepness, since it drops 185 feet in three miles without any falls, thus being the steepest river of its size east of the Rockies, as well as one of the cleanest and most scenic. There are frequent canoe trips to the lakes of this area, but except for the National Championship White-Water Races in 1940 and 1941[1] there has been little white-water running on the Rapid River. During the white-water races a few foldboats managed to navigate the rapids successfully, and two Maine guides, Charlie and Allie Libby, are credited with having run the entire river in a twenty-foot canoe. In 1950 the upper part of the river was run during an A.M.C. canoe trip.[2] Despite some pessimism, we thought that a run down the entire river might make a fine canoeing trip.

On June 15 a party consisting of Darst Hyatt, John Tuckerman, Bob Jahn, Jane Coffin and I went into the area to explore the stream. A major problem is getting to the river. This can be done in a number of ways, all of which are long, but the most expedient appeared to be as follows. Arriving in Errol, N. H., on Saturday morning, we arranged by means of a tricky telephone network to have Larry Parsons at Middle Dam send his truck and canoe-trailer down the Carry Road to meet us at Sunday Cove, which we reached by paddling up the Androscoggin River and across Umbagog Lake. The Carry Road has no connection with the outside and exists solely for portaging around the Rapid River. A painfully slow ride up the road brought us to Middle Dam late Saturday afternoon. With time running short, we put in immediately. The short upper part of the river, which drops thirty-seven feet in one-half mile, begins below the dam with a brisk turn to the right, followed by a long and more or less continuous rapid with some large waves which kept us near the shore. A narrow turn to the left in this rapid, known as Cemetery Curve, requires care. Our two seventeen-foot aluminum canoes ran single here, while the eighteen-foot canoe went through easily running double. A rocky turn to the left followed by a stretch of easy rapids and a short drop landed us in Pond in the River. There is a mile of flat water across the pond to the lower section of the river. A three-foot dam here is easily run, and a stretch of fast but easy rapids leads past Forest Lodge, home of author Louise Dickinson Rich. This is followed by a half-mile of moderate rapids with two short, steep pitches. Beyond this a brisk current led us to the brink of a long, steep rapid. With dusk approaching, we decided to call it a day.

We returned early Sunday morning, curious to see what lay ahead, our only guide being the contour lines of our topographic map, which indicated a descent of eighty feet in the next mile. The first rapid was a steep incline 300 feet long, emptying into a large pool. Although it appeared that, with luck, a single canoe might run this rapid, we were not in a position to gamble; and so we lined partway down until a

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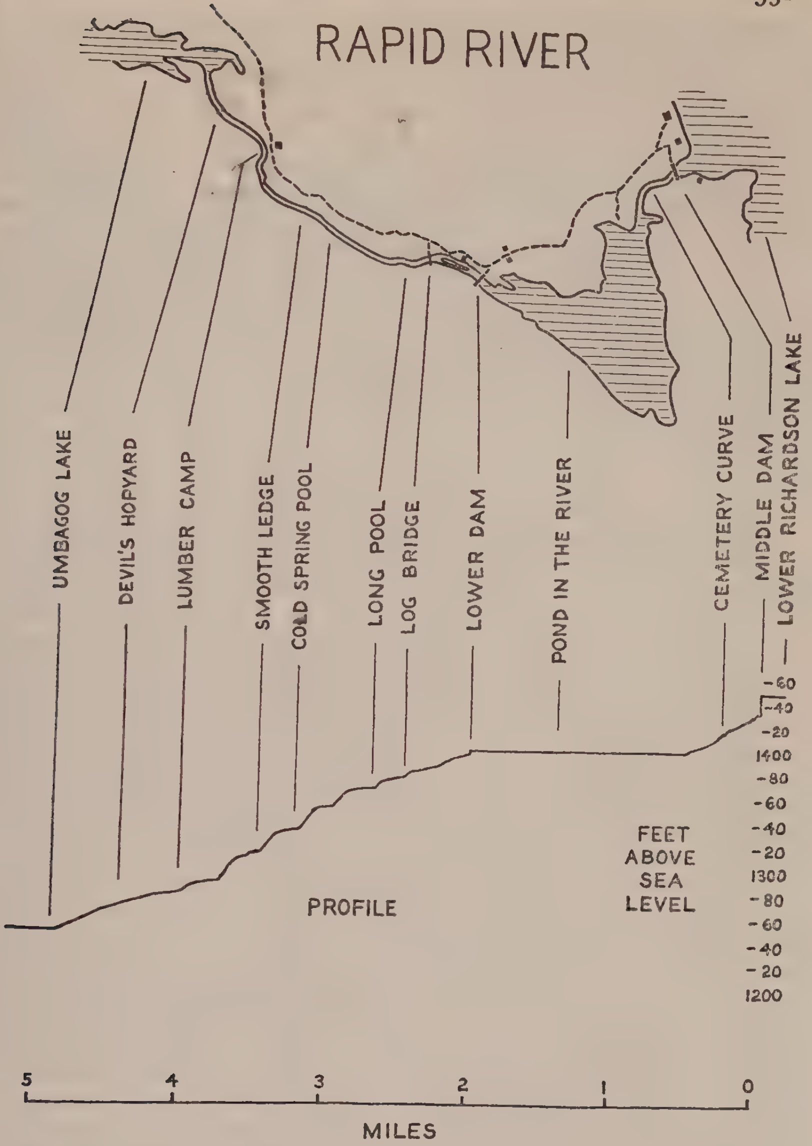
[1] APPALACHIA XXIII (December 1940), 255-7.
[2] APPALACHIA XXVIII (December 1950), 234-5.



route near the shore provided a fast and enjoyable ride down the remainder of the pitch. Two more rapids of the same type were managed in similar fashion. At the first of these our only upset occurred, when a canoe capsized while carelessly crossing the river in the powerful current above the rapid. The canoe and its occupants went partway down the pitch before reaching shore, but no damage was done. The fourth and longest rapid began like the others, but a route was found down the right side for a way. Then a right turn and a severe drop required lining. Below this there was a good run through a boulder patch, followed by a steep chute with large standing waves. Another steep chute beyond required care to avoid some large breaking waves. Below this is a long, continuous, boulder-strewn rapid known as the Devil's Hopyard. It is said that this stretch offered some difficulty in the foldboat races, possibly because the boats were so full of water by that time. By going carefully, however, and emptying our canoes when necessary, we managed these rocky rapids with no trouble, and a fast run ended in Umbagog Lake.

The river is especially suitable for summer canoeing since, besides being lake-fed with plenty of water all season, its height can be determined by contacting Middle Dam, where the flowage is measured daily. We had 700 cubic feet per second, a more than ample volume. With this amount of water the river is indeed rapid, but a cautious, experienced party should have no great difficulty. We all felt that this river offers excellent canoeing, and we plan to return here often in the future.

STEWART COFFIN

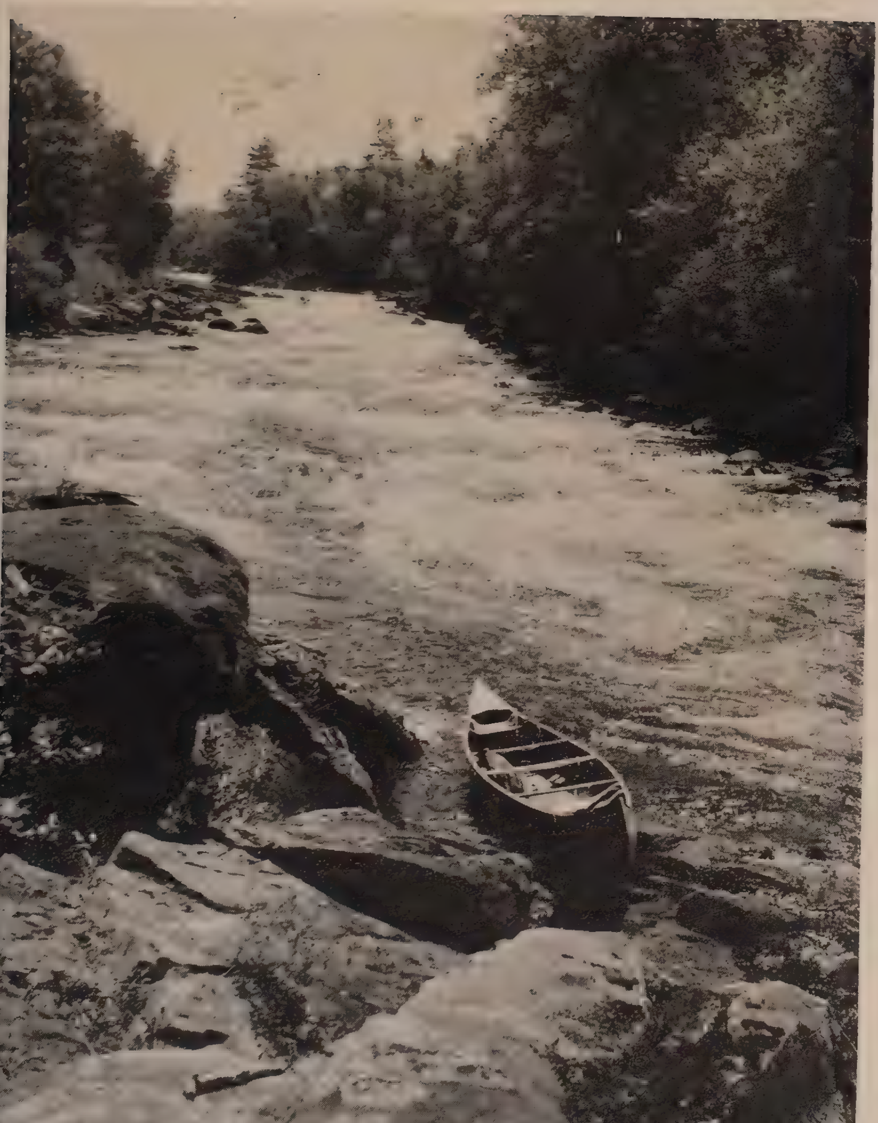
Hudson Highway. Six members of the white-water group of the Connecticut Chapter set out on the upper Hudson River on July 21, to spend seven days and six nights on the river. The lack of water had made us decide on running single, each with his two allotted waterproof bags.

We put in at the bridge on Route 28A, east of the town of Newcomb, N.Y., about 4.30 p.m., and covered only a couple of miles that first day. We had before us only twenty-five miles by river to the town of North River, so we could afford to make the trip in quite a leisurely manner.

First camp was at the head of a delightful pool, among the large white cedars which are so common along this part of the river. We managed to find drinking water at all but one camping place, so were obliged only once to boil river water for drinking. We had a good variety of food, because weight was no particular problem. We did, however, try out some new dehydrated foods, and supplemented our diet several times with fresh fish from the river and blueberries and serviceberries from the bank.

Shelter, for the main part, was of our own devising. Nick made two lightweight tarps, about two yards wide and four yards long. To construct the shelter we tipped one canoe up on its side, and rested two other canoes bottom-side-up at either end of the first one, with their other tips resting on the ground. The two tarps we stretched crosswise, overlapping, and laced them along the gunwales of the two overturned canoes. A rope stretched from two trees, or other support, and running lengthwise under the middle of the tarps, kept them from "bellying" and made sure of their shedding water. The canoe on its side provided good storage space for duffle.

The first ten miles of the trip had several long stretches of flat water, usually anathema to white-water enthusiasts. Now, however, our amplitude of time made us tolerant, and we enjoyed being able to examine beaver dams, take note of the trees and flowers growing along the river, and see the merganser families which were being brought up in this remote area.



Stewart Coffin

RAPID RIVER, MAINE

Lydia Loveday

UPPER HUDSON RIVER

Lydia Loveda

THREE-CANOE SHELTER

Our second day brought us to a logging operation on the river, which was very interesting to watch, but which necessitated a quarter-mile portage. That night we passed the only habitation along this part of the river, a sportsman's camp at Gooley. Right after this the Cedar River comes in from the west, and then the rapids become more interesting. At this water-stage we found only one section, where the bed of the river narrowed so much among large boulders, that we had to line down some of the canoes.

A few miles below Gooley the river takes a right-angle bend to the east, where it detours around a steep rock cliff about 300 feet high, called Blue Ledge. We lay over there a day and found it a delightful spot. We climbed the Ledge, swam the rapids on the way back, fished and rested.

Our last day on the river proved the most exciting. We had to rescue Fred when he got hung up and his canoe went on without him. A thunder-shower grew so severe, just after we passed where the Boreas River enters from the left, that we felt constrained to take shelter in the spruce forest on the bank. Then the river widened so much that finding a channel became a real challenge, particularly since it continued to rain.

We were a pretty soggy crew as we came into North River and climbed up the bank, down which water was cascading in muddy rills. But we were not really sad about the rain, since if it had been any pleasanter on the river we might have been tempted just to continue on downstream.

After we retrieved the cars, and loaded our soggy gear, we ended the trip with a steak dinner in the next town below, called North Creek, which paradoxically is larger by far than North River.

LYDIA LOVEDAY

EXCURSIONS

Scandinavia, June 29-July 21. Leader, Agnes Prestrud. 26 members. —Flying at 17,000 feet above the Atlantic Ocean, we followed a streak of sunrise much of the night. This, combined with northern lights and some prodigious cloud effects, kept me wide awake. Very pleasant was our one-hour stop at the sunny little garden airport of Prestwick, Scotland.

After two days of sightseeing in Oslo we moved over toward the west coast of Norway and worked our way north, stopping first in Ulvik, at the head of the Hardangerfjord, so situated that you could look down to where the fjord seemed to come to a V and the mountains rose up. On the way we saw the Vöringfoss, a waterfall to end all waterfalls—so it seemed at the time. But every waterfall we saw seemed to be bigger and better than the previous specimen. At first all the photographers piled out of the bus to shoot them but finally you were left with no more adjectives and just said, "Oh yes, another waterfall!" At Stalheim, situated above a deep valley with a rushing stream, we walked up the nearby hill in the evening and were greeted with disparaging stares by a huddle of wondering cows. En route to Turtagrö, we had a steamer ride on the lovely Sognefjord, where you look up at walls rising sheer out of the water to a height of 1000 or 1500 feet. Behind them are snow-capped mountains. Then there may be a comparatively level, pocket-handkerchief-size plot of ground high up on the hillside. There you will find a farm or a little community, approachable only from the water. Just a few were deserted—the people driven out by avalanches.

At Turtagrö we started our three-day walk in the Jotunheim. (You know, that's where the giants lived according to Norse mythology.) On the first day we went through a lovely valley dotted with stone huts, roofed with sod, where hay is stored. The valley was treeless, since we were up over 2000 feet, but with many streams and a riot of wildflowers. We were headed for Fanaraaken (6790 ft.). Although the highest point in Norway is only just over 8000 feet, the mountains seem much higher than they actually are since the sides are steep and the latitude so far north that you get many snow-capped peaks. We ran into more and more patches of snow until, for the last third of the way, there was snow continuously, both underfoot and flurrying down upon us. Visibility was almost nil. It was nice to arrive at the cozy little hut. There was a big stove in the living room with a good fire; it was topped by a huge boiler of snow melting for the water supply. The bunkrooms, too, were warmed by stoves. Four of us climbed the very steep stairs to a little four-bunk room where an attendant immediately built up a fire for us.

After we had finished lunch we went out to visit the weather observatory. We found out that, *sans* snow, the building had twelve steps. Now there was only one visible. (About eight feet of snow and temperature 32°!) A helicopter brings supplies but the visibility had been so poor for some time that it had not been able to make its usual trip.

The next day, again, began with almost zero visibility but, as we descended, it got better and better. Such beauty of snow-capped mountains and glaciers and roaring waterfalls and mountain streams! There was still a lot of snow, but so solid that we generally sank in only about an inch or so. Then, every so often, someone would go in, plunk, to the knees or hips. Finally we came out of the snowy region and down to where there were wee dwarf birches and, again, wildflowers and wildflowers—some that looked familiar, only a little different, and some that were complete strangers. We loitered quite a bit to enjoy the sun and all the loveliness to the full, but finally made our way in through a long valley to a hut on a steep hillside with a long waterfall dashing down beside it. This was Skogadalsböen. It was a more pretentious hut than the one on Fanaraaken, but not so interesting.

On the following day the weather collapsed on us again. Yet it was a lovely walk, over uplands and through valleys, with our first glimpse of reindeer. But by afternoon a steady, driving rain set in. Since it turned out that a bridge was down on our trail, we had to trudge along a hard road for three hours, in the pouring rain, to reach our next hut. Along the road were tremendous walls of snow which had been cast up by the plow. We reckoned that some of them must have been at least fifteen feet high.

The hut at Leirvassbu, where we spent the night, was a good example of how successfully Scandinavians can deal with modern architecture. It had a very steep roof, and retaining walls that sloped inwards (to shed snow, no doubt). The interior was cut up into many levels and decorated with wood carvings and very attractive iron grillwork. The next day, very tightly packed in a jeep, we were taken out on a bouncy road to Elveseter.

Then came the Geirangerfjord, with its Seven Sisters Waterfall, a tremendous surge of water dropping sheer—from between 500 and 1000 feet; and the Way of the Trolls, where we climbed up via bus for some 4000 feet by terrific hairpin turns. Before reaching Trondheim, we went through a farming region. Quite often the farmhouse will have a sod roof, but no matter how humble, there will be lace curtains of real lace, and always a bright thrifty flower garden. Speaking of sod roofs, which are always covered with grass, wildflowers, and even quite sizable birch trees, I saw a goat tied up on one of them. It recalled the story of the man and wife who changed places. When the wife came home, she found the cow hanging off the roof and her husband stuck in the chimney, for cow and man were tied together.

From Trondheim we flew to Tromsö and there caught the ship *Erling Jarl* for the North Cape. It seemed ridiculous to go to bed that night. There was daylight all through and the sun set only to go about the business of rising again immediately. The voyage to the Cape was a joy—high headlands and snow-covered peaks, and a bird island where the birds flew up in myriads when the ship drew near and whistled. We anchored off the Cape and went ashore by tender. Amazingly, it was a fine morning. It took an hour or more to ascend the Cape on a grassy path bordered by many wildflowers. At the summit you could look down, down on the Arctic Ocean.

From Honningsvaag, where we disembarked, there is a road up the North Cape and so we set out by bus to see the midnight sun. When we had gone about one-fourth of the way, the mist shut down. No midnight sun for us.

To bed then for two or three hours, and up to catch the *Sigurd Jarl* at 6, before breakfast, with the morning chilly and drizzly and the ship one hour late.

From Hammerfest we had a long ride across the Arctic wastes of Finnmark to the Finnish border—just rocks, rocks, rocks, with here and there a grassy lawn with Arctic flowers. At such places the Lapps had their camps and their big flocks of reindeer. At Outakoski, just over the Finnish border, we spent the night at a tourist house, so-called, located on a high bank above a very pretty river. The accommodations consisted of a large bunkroom for the men and another similar one for the women. Five of us took a dip in the river before breakfast, fancying a swim above the Arctic Circle. The water was not extremely cold, thanks to the good old Gulf Stream!

We flew to Helsinki, to Stockholm, and on to Copenhagen, having a couple of days in each.

JOSEPHINE A. HOPE

Hudson Bay, August 2-18. Leader, Ronald L. Gower.—This was a combination of two trips—one, by steamer on the Great Lakes from Buffalo to Duluth, with four hundred other passengers; the other, the annual excursion of the Canadian National Railway from Winnipeg to Churchill on Hudson Bay. On a Saturday evening we sailed from hot

Buffalo into cool rain and wind on Lake Erie. We reached and left Cleveland next day before breakfast, but stopped daily thereafter for shore visits of several hours. We moved on to Lake Huron and Mackinac Island for a hilarious carriage drive with a resourceful young driver. Then back to the ship for the leisurely evening trip to Sault Ste. Marie. Most passengers stayed awake and went on deck after midnight to watch the ship through the locks. Soon we were in Lake Superior. At Munising we were met by members of the Chamber of Commerce, who drove us to Munising Falls, with a huge overhanging circular rim of rock beneath which we could walk behind the waterfall and look out and down into the little gorge. Reluctantly we left the ship at Duluth, and then went on to St. Paul where, after a walk across the Mississippi, we boarded the night train for Winnipeg.

Here in Winnipeg the Great Lakes tourists were joined by thirteen others, completing our party of thirty-four. After a day and a night in this beautiful city, we joined three hundred in the annual special train to Churchill. The train was our hotel for the week, since none of the towns we visited could have provided facilities for so large a crowd. Throughout the year several trains run weekly with sleeping and dining cars from Winnipeg to Churchill, but their stops en route are brief and businesslike, not the lavish occasions we so enjoyed—for instance at Dauphin and Flin Flon.

From The Pas ("The Paw") northward, we saw new landscape—muskeg, too fluid and shifting to bear the weight of a man; telegraph wires supported by crazily-leaning tripods in tundra permanently frozen a few inches below the surface; few or no trees, but many low plants, especially wild barley and fireweed in full bloom. At Flin Flon, town of mines and smelting, rock, slag and cinders covered the ground; no green growth is possible in the complete absence of Mother Earth. The effect is desolation. Yet, in only twenty-five years Flin Flon has acquired 12,000 people.

Far underneath the smooth floor of the beautiful recreation hall of Flin Flon, dynamite is set off nightly in the mines. In this hall, as the climax of the dance for our train, a Scottish piper piped in a forty-pound fish, caught that morning and suspended on a pole between the shoulders of two men. A hostess drew the name of the winner in this event of chance—an A.M.C. member, George Peters! One night we saw spectacular lightning, diffuse, brilliant and prolonged; on another, the train stopped to let us off in the country, where we saw all at once a full moon, a comet, northern lights and shooting stars. Finally we drew into Churchill, about 600 miles south of the Arctic Circle, widely sprawling between Hudson Bay and the Churchill River over more distance than the eye at first realizes. The Hudson's Bay Company and other modern buildings, buses and taxis whose tires wear out after six months on the unpaved roads, a huge new grain elevator, oil tanks, a whaling factory, and weathered wooden houses comprise the town. In the long hours of summer daylight flowers grow lavishly in the fields or in tiny gardens. Some distance out of town stands the huge army base maintained jointly by Canada and the United States. Everywhere dust flies thick from the roads, before slowly settling. Trudging in the roads (there are, of course, no sidewalks) we learned immediately to choose the side away from the dust.

Impressions from the trip have already begun to blur. New people and new ways? Scottish speech in the North everywhere; Indian babies carried on backboards by their mothers; Indian women shyly vanishing into their host's kitchen till coaxed to return and demonstrate the tribal art of biting patterns on folded birchbark; nine bagpipers wearing the kilt at Beaver Lake near Flin Flon, gloriously parading for hours back and forth in the clearing, accompanied by laughing children; a picnic under the trees at the same place, in cold wind and hot sun, with Indians and small boys happily crashing the party; an Anglican church with special admonitions in Cree to parishioners about the practical applications of Christianity ("Women wash the church floors twice a week, and don't give the children gum to chew in church"); nomadic Chippewas in summer tents on on the Churchill beach, with canoes, dogs and sleds nearby for the trek south just before winter closes in; homesick Canadian and American soldiers at the Churchill Army Base.

Wildlife and out-of-doors? Mosquitoes in 85° heat on our first afternoon at Churchill; mink of all colors, unexpectedly friendly and curious at the ranch of an Icelander; white whales sporting in the cold blue waters of Hudson Bay; pippits, curlews, phalaropes and snow buntings on an afternoon "too windy to see many birds".

The return from Churchill to Winnipeg took only two nights and a day, since our stops were fewer and usually minutes instead of hours long. On our last afternoon before starting back East, we wandered in the sunny stillness of gardens, lawns and encircling stone walls at Lower Fort Garry and old St. Andrew's Church above the river near Winnipeg. For the first time in the two weeks there was no bustle! Then east to Montreal, for a brief visit on the way home.

HELEN SHERWIN

HUTS AND TRAILS

New Ethan Pond Shelter. The Trails Committee of the A.M.C. announce the addition of a new shelter, the nineteenth, on our system of trails in the White Mountains. Located on the eastern shore of Ethan Pond between Zealand and Crawford Notches, on the Appalachian Trail, it provides a convenient stopping-place between Mizpah Spring Shelter north of Crawford Notch and Zeacliff Pond Shelter or Guyot Shelter, both on the Twin Range. It also provides a base for trampers in the eastern region of the Pemigewasset Wilderness, where interesting shelter-trip possibilities are now opened up by trails connecting with Desolation Shelter, until now the latest built by the A.M.C. (1947), at Stillwater. Circuit trips may be planned to include Carrigain Notch, Mt. Carrigain, Mt. Bond, Mt. Guyot via Bondcliff, Zealand and Shoal Ponds, and Thoreau Falls.

Built in its entirety by the A.M.C. Trail Crew members led by Frank von Hippel, Trailmaster, it represents a new concept in construction, differing from the regular A.M.C. pattern. Vertically stockaded, peeled spruce logs form the side-walls; it has the usual open front, and is saltbox in shape. It has been treated with creosote and has a steel roof.

A short distance off the Ethan Pond Trail, the shelter sits on a small rise. The view from the "deacon's-seat" is excellent, looking west over the pond to the Twin Range and Zealand. Accommodation is for ten persons. The area is provided with a fireplace, covered refuse pit, and toilet.

The A.M.C. Trail Crew, untrained in construction until now, have done a masterful piece of work, with advice from Cliff Pratt of Passaconaway, who furnished sketches and gave consultation on construction methods.

F. R. MAKER, *Councillor of Trails*

A volunteer trail-maintenance group from the Connecticut Chapter visited the White Mountains again this summer. Based at Zealand Falls Hut, the group of nine members "worked" A.M.C. trails from July 13th to 18th. Approximately eight and a half miles of trail were brushed to standard. Trails worked were the A-Z, Willey Range, Lend-a-Hand and Twinway. Hutmen John Allen and Jeff Belcher were excellent hosts and provided those satisfying meals. A short trip on the final day, under the leadership of A.M.C. Director Fran Belcher, reopened the trail to the swimming-hole in Whitewall Brook which may be reached from the Ethan Pond Trail.

MARIE CARDEN

Building of Camp Heermance. My father, the Rev. Edgar L. Heermance, spent his entire career as a minister in Minnesota. But during his college days he had tramped about the Waterville Valley, and in later years family ties brought him to Wonalancet on visits. In 1911, with his immediate family, he helped Mr. and Mrs. Fisher open the Ferncroft Inn.

Mountain-climbing interest flourished at Ferncroft. Father made this note, in the unpublished *Heermance Book,* about the shelter project: "A group of husky friends—Fred Luquens and other Yale classmates—had joined us and helped me achieve a much-needed cabin on the summit of Mt. Whiteface. After I left they named it Camp Heermance, from the chief engineer." The Wonalancet Out Door Club records state only that the shelter was built by Mr. Fisher and his guests. The A.M.C. *Guide* of 1920 gives the date as 1912.

Father had selected a broad rock-face as giving ideal wind-protection across the front of the shelter and also as reflecting some of the fireplace heat inside. But it is the presence of the rare mountaintop spring that encourages summit-camping on Mt. Whiteface. Father told me of one hot workday when the spring was low. A last two cups had been reserved for the end of the day. Then "some fool lady-hiker" decided that the mud ought to be cleaned out. A record for speed in getting down the mountain was set that afternoon by the crew.

Father took considerable pride in his backpacking ability. Others assisted with the supplies, but he carried the heaviest bulk. He would make two trips a day. Logs were cut at the highest possible point and then carried the remaining distance. For a good idea of the kind of loads involved in mountaintop construction efforts, here is a first-hand account by Caswell E. MacGregor, of our A.M.C. Three-Mile Island, of his later work on Whiteface:

> In '33 I helped to repair Heermance and to put a complete new roof on it. Walter Walker, a man of about 50 who was handy-man of Wonalancet, was the man with whom I worked.
>
> As a young and vigorous college fellow I had loads of energy. The corrugated metal roofing was either 6x4 or 7x3 feet, an awkward size to horse up a mountain. From the initial pile he and I would each carry one or two sheets, for 200 yards. He would return for his next load while I advanced another 200 yards, deposited mine, and returned for the load he had brought up. The one who worked faster could get a bit of rest between loads.
>
> As an older native, he was determined to wear out the college boy. Nobody wore out, but we had the whole load—about 14 to 16 sheets—at the top in a day and a half.[1]

It was the lure of pioneering that had taken Father West as a young preacher. He had found and married a pioneer girl, and had been raising an active family. Returning East about 1920, he found many fields of pioneering still ahead. In his own words:

> The years pass. A voyager comes back to little Connecticut to carry out his great dream—a life of study and writing. To anyone who, like Ulysses, has roamed with a hungry heart, no subject is alien—the price of pig-iron is as significant as the death of kings. . . . And one's surroundings, too, are important, more important perhaps than anything else. I know my own small State; I studied its history and worked on a guidebook of its towns and roads. With trail-making as a hobby, I organized a network of hiking trails over the Connecticut hills. I have managed a forestry association, trying to make the woodlot pay. I seem to be always building something. . . .[2]

The program of the Connecticut trails system was launched at the Sleeping Giant in 1929. A marker there commemorates Father's trail-work and twenty-five years of development under the Connecticut Forest and Park Association. The basic idea came from the trails network of the White Mountains. The application of the idea to Connecticut developed at our summer camp at Mt. Carmel. Our walking routes gradually became definite trails, and from these few miles of family trails grew Father's dream of trails reaching every corner of the State. By 1935 he could point to the reality of 400 miles of trails.

Even the Connecticut trail-blue harks back to the Wonalancet blue blazes. I remember the evening at home when we tested paint shades graded from W.O.D.C. medium blue to white. The pale blue selected for the Connecticut trails was the shade which showed up the longest at dusk.

Trail-building led into forestry, the problems of the small woodlot into those of using wood to better advantage. Back of these later interests was always the inspiration of his favorite Mt. Whiteface. Again in his own words:

> Every so often I feel the necessity for climbing a mountain, usually one of the familiar peaks in central New Hampshire. This is not

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[1] Letter of September 10, 1957, from Caswell E. MacGregor.

[2] From *The Time Stream* (privately printed, 1942), by Edgar L. Heermance. Chapter 1.

merely for the joy of the physical effort and the refreshing sights and smells along the way. Climbing a mountain is an inward exercise. It gives a sense of space so vivid that it almost hurts. I feel my own littleness in the vastness of the surrounding world. The vista of other summits, the massive shoulders of the mountain, the valley far below with its doll-like houses, the familiar river, which takes its start in the mountain spring at my feet, help me to regain my perspective.[3]

LOUISE H. TALLMAN

An Early A.M.C. Trail Crew. In the spring of 1920 Sherman Adams had hired out to the A.M.C. to cut some trails during summer vacation. Sherm, president of the Dartmouth Outing Club and leader of the Glee Club, sang a rich basso profondo and thought it would be nice to recruit a high tenor and a baritone to keep him company in the wilds of Kinsman Notch and the Pemigewasset Wilderness. Robert W. Elsasser, now a prominent New Orleans businessman, and I, a not-so-prominent Boston businessman, fellow-members of the Dartmouth Glee Club, seemed to fill the bill.

Our headquarters was a room in the barn loft of the old Russell House in North Woodstock, since burned or torn down. We left it every Monday morning about 5 a.m. and came back to it every Friday night about 5 p.m., in time to soak off the sweat and pitch of five days in the woods, climb into our white flannels (you never hear of these nowadays, but at that time they were the summer dress *ne plus ultra* of the Ivy League), and beau the waitresses from the Deer Park and Alpine Hotels to the movies or a dance.

In the woods, our first and major accomplishment was to build a trail, where none had been before, from Bog Pond over both Kinsmans and down to Kinsman Pond, where we connected with the old trail leading over the Cannonballs to the summit of Cannon. Professor Karl Harrington had blazed the route we were to cut. I remember him as a rather small, charming, soft-spoken individual, with a perpetual twinkle in his eye. He was affectionately known to all who worked under him as "Diz", because he was supposed to fall over very easily when out on the trail. I must confess that we never saw him do this at any time when he was out with us inspecting our progress.

Our equipment consisted of an Abercrombie and Fitch oil-silk tent, portable tin baking-stove for use over an open fire, other cooking utensils, blankets (no sleeping-bags—we used fir balsam for mattresses), two double-bit axes, a machete, a crosscut saw, and a pair of ignominious bush-clippers known as a grubhook.

I have no doubt that present-day trail crews are flown in by helicopter and carry with them these newfangled shatterers of wilderness silence, the motor-powered chain saws. We had no such luxury. Everything we did was done the hard way, accompanied by grunts, groans, and much earnest and heartfelt cussing.

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[3] *Loc. cit.*

Donald F. Sawyer

SHERMAN ADAMS

After Tangling with a Hornet

Robert Elsasser

ADAMS AND SAWYER

Packing Roofing to Liberty Shelter

Noble McClintock

MRS. McCLINTOCK'S RACCOONS FINISH UP THE PINKHAM NOTCH FOOD

The modus operandi of that early period was for one man to go into the brush first with the machete, stripping all small balsam and spruce branches at one swift stroke to left and to right. He was followed by the axeman, who chopped off larger limbs and cut down small trees which stood in the way. Bringing up the rear in an unglorified operation was the third man, who wielded the lowly grubhook, taking out bushes, cutting roots and tiny saplings disdained by machete and axe, and feeling terribly sorry for himself! Needless to say, we rotated positions in this production-line so that nobody had more than a day at a time on the last, despised occupation.

When we came to a blowdown, we took turns at the crosscut saw; and there were other times when all three of us would join in heaving rocks and smaller blowdowns off the trail. All in all, it was a very efficient method of making trail; and except for the mechanized saw, I suppose today's trail crews do it in much the same way.

Sherm Adams did all the cooking, and Bob and I did the dishes. After supper we used to sit around the campfire and harmonize. Too bad our only audience was the local rabbit, porky and skunk population, because we had a large repertoire of songs, ranging from highbrow Glee Club arrangements to the ever popular barroom ballads of the period, like:

> "She was poor but she was honest,
> The victim of a rich man's whim. . . ."

As a matter of fact, our vocal talents were not wholly wasted, because we gave several impromptu concerts on the grounds of the Hotel Look-Off, and one Sunday we sang a couple of trios from the choirloft of the little white church in North Woodstock.

We were about three weeks building the Kinsman trail, after which we spent the rest of the summer clearing existing trails. One afternoon, halfway over to Lost River, I was stupid enough to let my hand slip off the handle of the machete down onto the blade, which we kept razor sharp. Sherm applied first-aid from our kit, but decided the deep cut in the two middle fingers of my right hand needed medical attention, so I set out alone over an old logging road for the doctor in North Woodstock. Halfway there, a rotten log bridge let go, and down I went onto the streambed, scared but unhurt. That was adding insult to injury, but when the doctor at the Parker Young plant decided the best thing to do was to pour iodine into my wounds, I gave up and quietly passed out! That was before the discovery of today's wonderful sulfa drugs. For the next couple of weeks, I was relegated to the grubhook, with an occasional lefthanded go at the machete, and Sherm and Bob had all the fun.

A little later on, when we were camped at the brink of Thoreau Falls, Sherm tangled with a particularly vicious white hornet, which stung him under the eye and closed it completely. I have a marvelous snapshot of the Assistant to the President of the United States in this condition; I value it among my most prized possessions. Please note that the hornet which closed Sherm's eye was not a political bug. That one bit him later.

This just about concludes my simple story of one of the original trail gangs, except for a highlight or two. Riding in to the Pemigewasset Wilderness on the old Parker & Young Co. log train; catching our own supper of trout from a raft on Ethan Pond; getting lost after dark on a trout brook up Lost River way: these things I remember with great nostalgia.

The firm bond of friendship cemented by our two months' joint laboring in the woods has never been impaired, and I'm sure that must be true for all the trail gangs which have been in operation in summers all through the years.

Donald F. Sawyer

The Pinkham Notch Camp, where my husband Noble McClintock works as carpenter, sends me home all the waste breadcrusts and toast and food they've cooked and can't use, along with the fishes' heads, for my raccoons. This is the fourth year I've had them. They start coming in April, very thin and very hungry. Then around the first of May they bring their children. This summer I have three mothers and eleven babies that come up on the roof outside my bedroom window three times every night, at 9, 12 and 2.30. I get up each time and give them a big dishpan full or they start racketing around. One of them has the habit of opening the window if it isn't locked by working from the bottom with his hands. I have to get up and get more food then or they'd come right into the house. If there isn't any food there, they just claw the side of the house and the windowsill. I've had to put four new rows of shingles along the length of the shed.

This spring Paul Doherty found a young coon who had got lost. Paul brought him up to my house. After about a month, when he began to get rude, I put him out with the others. He just raced across the roof and down onto the ground. The others didn't do anything to him because they didn't have time.

The little ones sit just like little cats and wash their faces with their paws. It's amusing to see them clean out a tumbler of jell. They put their hands in and discover it's very sweet and tasty, then they'll clean out the tumbler just as clean as you could wash it.

About the first to the middle of October they go away. They hibernate somewhere—it must be across the tracks, because that's where their path is. They have a regular road through the garden, and never touch a bit of garden food.

Belle McClintock *(tape-recorded)*

ROADS AND RAILWAYS

As the great new highways through the White Mountain notches depart from the winding lines and grades they have followed for more than a century they are leaving behind more than the old roadway to be hidden by the encroaching forest. It may be an old cellar-hole of a farm long since abandoned, or some other reminder that people once had a home beside the road.

A case in point is to be found in the little, narrow tract of land between the tracks of the Maine Central Railroad and the (now old) route U.S. 302 near Sawyer's River Station in Hart's Location, at the lower end of Crawford Notch. This summer U.S. 302 has here been relocated to the westward of the railroad, eliminating two grade crossings and incidentally leaving deep in the woods a small cemetery which was within ten feet of the old road. This cemetery contains only two stones. The westernmost is inscribed:

DONALD McIVER
DIED
Nov. 15, 1867
AE. 36 y'rs.

The easternmost stone, slightly smaller, bears the inscription:

MALCOLM J.
Son of Donald
& Katie McIver
died
Nov. 13, 1867
AE. 5 y's. 10 m's.

Details of this old tragedy are undoubtedly prosaic: the implication of the death of father and son in some sort of epidemic is obvious, and borne out by local tradition in Bartlett where, until very recently, a female relative of the McIvers was living. But soon even these lonely graves, the last reminder of Donald McIver and his young son Malcolm, will be buried deep in the woods, lost to posterity except when some hunter, beating through the brush eastward from Sawyer's River Station toward the Saco, chances upon them at the foot of a handsome white birch tree.

BRADFORD F. SWAN

The Mt. Washington Cog Railway maintained its unblemished safety record when one of its locomotives broke a crankshaft while descending on September 2. The train was stopped without difficulty and a work train with spare parts dispatched to effect repairs. A three-hour delay for the train's passengers and for thirty passengers of another train waiting to leave the summit was the only inconvenience occasioned by the mishap.

KENNETH A. HENDERSON

CONSERVATION

The 85th Congress's Record on Conservation. Although a record-breaking number of bills were introduced in Congress and some noteworthy conservation actions taken, the unfinished work greatly exceeded the accomplishments. Positive conservation gains were:

(1) The appropriation of $8,770,000 to the Forest Service for recreational areas and facilities, an increase of more than five million over the similar appropriation last year. It will permit a start on "Operation Outdoors", the Forest Service's five-year recreational program. For im-

provements in wildlife management an increased amount was voted, $510,000, which however is less than conservationists think adequate.

(2) The National Park Service received increases for management and rehabilitation of the parks, and for constructing new facilities as proposed in its "Mission 66" program (APPALACHIA XXXI, June 1957, 425).

(3) Though there were efforts in the name of economy to knock out the entire $50 million budgeted for construction grants to cities for sewage-treatment works under the Blatnik Act of 1956, this important water-pollution control program was continued.

(4) After nearly a decade of effort since it was first proposed, the National Wildlife Refuge was established by Congress for the protection of the rare sub-species of white-tailed deer found only on the Florida Keys.

(5) The Bruce's Eddy dam on the north fork of the Clearwater River, a tributary of the Snake, has been resolutely opposed by conservationists. The Fish and Wildlife Service is at work on a study of the effects of various Middle Snake Basin projects on the important fish and wildlife resources of the area. Pending this report it is believed that the 570-foot dam, which would flood some 48 miles of the valley, would destroy the vital winter range of the largest elk herd in the country and of mule deer and white-tailed deer, and would wipe out runs of steelhead trout and salmon as well as ruining a region of great natural beauty and recreation potential. This dam, included in the "omnibus" rivers and harbors and flood-control bill, was taken out by the House Public Works Committee, and a Senate amendment appropriating $500,000 in advance-engineering funds was resoundingly defeated in the House.

(6) Believing that its construction would relieve pressure for dams on other streams of the watershed which would result in damage to fish runs and wildlife habitat, some conservation groups have recently favored a high dam at Hell's Canyon on the Snake. Though authorized in the Senate, this dam has met tough and probably permanent opposition in the House Committee on Interior and Insular Affairs.

The Merrimac River Flood Control Compact has recently been approved by Congress. Since the legislatures of New Hampshire and Massachusetts had earlier acted affirmatively on the project, the way is now cleared for valley-wide flood control on this vital river.

Ten-pound Island in Gloucester Harbor is to be conveyed by the Secretary of the Treasury to the City of Gloucester for a recreational and historic site.

The Great Outer Beach of Cape Cod has been proposed as a fitting location for a national park. See the A.M.C. *Bulletin,* Oct. 1957, p. 181.

A Great Basin National Park is proposed by a group who met and organized at Lehman Caves National Monument, Nevada, on August 25. The park would include Wheeler Peak (13,061 feet), the culminating summit of the Snake Range, on which Weldon Heald in 1955 discovered an active glacier (APPALACHIA XXX, 610, December 1955) which he named Matthes Glacier; Lehman Caves; and an "appropriate and adequate portion of the surrounding area". Although environed by deserts, here are the canyons, cascading streams, varied forest, lakes, and flower-strewn meadows of a true alpine region. As a superb example of the unique basin-and-range topography, this area warrants preservation in its wilderness condition.

For the Ball Mountain Flood Control Dam on the West River, Vt., ground-breaking ceremonies were held at Jamaica, Vermont, on July 20. This is the eighth such structure to be built in the Connecticut Valley by the Corps of Army Engineers. The first of three planned for flood control on the West, Ball Mountain Dam will control 172 square miles of drainage area at a total cost of $11,100,000. Since this dam is solely for flood control, it should not interfere too seriously with white-water running on this favorite stream.

MARJORIE HURD

Rhode Island is proud of its forest-fire-fighting organization, which is so excellent that, although this past summer has been the driest in many years, fires have been stopped before they attained much headway, resulting in little damage to the state's woodlands.

JOHN B. HUDSON

In New Hampshire. The State has purchased two sites on Lake Winnepesaukee where it is proposed to develop public recreational facilities. On one of these, the Page site in Gilford, limited accommodations for picnicking and bathing will probably be available by next summer.

Echo Lake State Park and Cathedral Ledge State Park are two attractive parcels close by each other in the Saco River intervale. Tentative plans include purchase of land between these two areas and development there of a large park.

Waysides. The Department of Public Works and Highways has provided many roadside picnic areas with picnic tables and accommodations for parking cars. The waysides developed by the Recreation Division provide, in addition, fireplaces, toilets and often drinking water. There are now five of them: Dixville Notch, Honey Brook, Chesterfield, Annett and Fay. The Legislature has just passed a bill to provide additional waysides at the Me.-N.H. line on Route 2, at Madison Boulder, at Sculptured Rocks, at an undesignated location on Route 16 along the Androscoggin River, and an extension of the Dixville wayside.

Up-hill devices. The Legislature has set up a board whose concern it will be to develop standards of safety in design, construction, operation and maintenance of mechanical devices for transporting passengers up-hill—primarily ski-lifts, but also tramways and chairlifts operated the year round.

Coleman State Forest Park. An area of some 1200 acres including Little Diamond Pond in West Stewartstown was acquired last year, to be both a forest and recreational reserve. Protection will be given to this delightful pond and the area, which reflect typical north-country terrain and ecology.

Dartmouth College, which as residuary legatee of Col. Harry Teague has come into possession of the cog railway on Mt. Washington, some 20 acres surrounding the Base Station and some 60 acres and buildings on the summit, has stated that it does not desire to operate these facilities itself and has offered the State of New Hampshire an opportunity to see if these properties are of such character as to be of public concern. Two committees have been set up, the Mt. Washington Study Committee to consider the above question and the Mt. Washington Advisory Committee whose aim is to bring about better conditions of a housekeeping nature on and about the summit, such as general pick-up of rubbish, removal of decrepit and obsolete structures, uniformity of signs, etc.

RUSSELL B. TOBEY, *Director of Recreation,*
New Hampshire Forestry and Recreation Department

The Great Stone Face is to receive another lifting. The wall of loose stones built in 1916 at the time the forehead was anchored to the cliff by tie-rods was rebuilt and cemented by the Rev. Guy Roberts of Whitefield in 1927, but apparently time has taken its toll and further work must be undertaken to prevent frost action from destroying the symmetry of the face.

KENNETH A. HENDERSON

NATIONAL PARKS

The National Park Service is progressing on the Mission 66 program. The Blue Ridge Parkway now has 337 miles of its projected 477 miles open to the public. The new visitor-center at the south rim of the Grand Canyon was opened this year. The Hurricane Ridge road in the Olympic National Park is nearing completion as an all-weather highway. The Stevens Canyon road was completed in Mt. Rainier National Park, thus linking the Chanapecosh Hot Springs Entrance on the east side of the park with the Paradise Valley road. A contract has been let for a new high-level bridge over the Nisqually River, which it is hoped will be out of reach of ice-damage from the glacier. Visitor accommodations at Grand Teton National Park have been increased, and a new road built east of the Snake River to relieve the present park roads of through traffic.

KENNETH A. HENDERSON

"Safety" Regulations in Grand Teton National Park. I am in the doghouse with the National Park Service for a climb I did not do. Instead, because of bad weather, I did another with an easy escape route. Consequently I am on the blacklist.

We were camped in early August at Amphitheater Lake in the Tetons, signed out to climb Mt. Owen. During the night the moon started playing hide-and-seek and by sunrise thick clouds scudded across the sky. Chief Guide Glenn Exum, who was camped nearby, agreed that the weather was bad. He heartily seconded my suggestion that it would be much safer to climb the east ridge of Disappointment Peak, a good rock climb but one where we could rappel to safety in a few minutes if the weather went really sour. On Mt. Owen we might spend hours in danger if a thunder or snow storm broke. When I said that we were not signed out for the alternative, Glenn pointed out that he knew where we were. Moreover, he, Hans Kraus and the rest of their party had been hoping to spend the day photographing, but with the weather as it was they would remain in camp, with our route in plain sight. I smugly felt that my decision was right when a rain squall hit us as we climbed the first pitch.

As it turned out, the weather was not so bad as it had early promised to be: a few more rain squalls, lightning on the Middle Teton, the higher summits in and out of the clouds. No storm broke until we were back at Jenny Lake. After I had innocently explained our change of objective to the young Park ranger, the verbal storm lashed loose. "Why did you not do what you said you were going to do?" Real safety meant nothing to him. "But no one knew where you were! We might have looked for you on the wrong mountain if you hadn't come back!" In vain I pointed out that if we had slipped, not only would Glenn Exum have known where we were; he would have seen us fall. Logic and safety were immaterial; we had broken *Park Regulations*. Out came the black book and our heinous crime was duly recorded. This time we got only a warning, next time we should be forbidden the area!

I know now what is right. Live dangerously—but legally.

ADAMS CARTER

[We sincerely hope that what occurred here was merely the isolated act of an inexperienced and perhaps self-important young ranger, mistakenly enforcing the letter of the law under inappropriate circumstances. It would be intolerable if any general policy were to be adopted of allowing ordinary Park rangers, themselves without special training or competence in mountaineering, to dictate to climbers of Adams Carter's standing the conditions under which a climb shall or shall not be done. Everyone, no doubt, understands that the Park Service must take all possible precautions against the occurrence, in particular, of such accidents as will entail expensive and time-consuming rescue operations, for which the Service has neither manpower nor funds to spare. But proceedings such as this serve no useful purpose in that respect, and may quite conceivably defeat their own ends. Instead of fostering among climbers a spirit of whole-hearted cooperation with the safety measures of the Park, they will tend to produce disaffection and a desire to evade the unreasonable restrictions whenever possible. Mountain climbers (God be thanked!) are an independent and enterprising lot, who endure regimentation badly.—ED.]

Last summer, in Glacier Park, a bear raided one of my camps during my absence. He climbed a tree to get up on a crossbar that was holding up my tent, and from there grabbed my pack, which was hanging up above. The crosspiece had been strong enough to hold the tent, but apparently not a bear too, for it broke, and bear and pack crashed down into the tent. The tent was twisted up and torn a little, and so was the air-mattress. Then the bear took my pack away with him. Since I had gone only a short distance, I had left in the pack a small ditty-bag with my tickets and money, and in the tent my camera and lenses. I didn't find the pack until the next day; the bear had taken it about 150 feet away into the bushes. The tickets and money were safe, because they had been on top; the bear hadn't bothered with that part of the pack, preferring to rip his way in from the bottom and sides.

After unscrambling things a little, I went over to the ranger's camp for the night. On my return the next morning, I found that the bear had been there again and had torn the tent some more, and also the air mattress. The rangers were very helpful, giving me pieces of canvas and showing me how to use an awl. I sewed all morning on my pack, so that I could get out of the place.

On another occasion while storm-bound in camp, a bear repeatedly nosed into my cooking fire. When I roared at him he would go off for just a little distance, and then come right back again.

These experiences, and others falling to the lot of a lone camper, raise certain questions.

Glacier is the walker's paradise. Its 1100 miles of trails are ideal for trampers, even though they were engineered primarily for pack-trains in the days when the horse was the chief means of access to the area. Part of this network may be enjoyed with a light pack, by making judicious use of auto, chalet and hotel, and auto-camping facilities. But part of it is accessible only to a party with complete camping equipment, whether carried by horse or on a person's back. My point of view is that of the individual person or small party, carrying equipment without the help of horses. There are two major problems: the campsites and the ubiquitous bear.

For a single backpacker, or a small party of backpackers, three things are essential in a campsite: water, wood and shelter—or perhaps one might better say, protection. The official campsites in the Park, almost without exception, have been chosen for large parties with horses. They are in wide-open areas, from the need of furnishing grass for the horses and space for the tents and other impedimenta. A few others are located with a view to the fishermen, and while these may be small in size they do not always satisfy all the above-mentioned requirements.

Not fully appreciated, it seems, is the need of the single tramper or small party for a small camping space and, combined with this, some protection from the elements, especially wind. If the tramper carries a tent, it is usually a small one and may be merely an elaborate sleeping-bag cover. Under most weather conditions, a tent is not needed in the Park. When it is, to have trees nearby is a great help. During this past summer a tent was a necessity, because of the unusually unsettled weather. When that important piece of equipment has been damaged by a bear, the need for an unexposed campsite becomes even more urgent.

The Park authorities have the demanding task of fire-protection, complicated by the frequency of dry thunderstorms. One aid in their program of fire-watching is to have the campsites clearly visible from lookout towers, as is frequently the case. I am not convinced, however, that this is a mandatory condition because, with their careful check of trampers and their system of radio communication with the towers, a smoke from an area identified as a campground, even though it is in the woods, need not present undue complications. A smoke from such a point, when no trampers are officially there, would have to be investigated by smoke-chasers, just as any unidentified smoke is now.

The single through-hiker, and small parties of the same, are welcomed as a matter for official statistics, but it has been my experience that in practice they are viewed with attitudes varying from uneasy tolerance to open hostility. Much of this uneasiness, particularly in respect to the solitary tramper, is probably justified. It is true that not everybody who puts a pack on his back and sets out to tramp a wilderness trail is qualified to do so in safety, or acts with proper respect for his surroundings. But this is also true of large parties. Proper accommodations should not be denied the former on that account.

The bear is another problem. On the trail, an encounter with a bear may be an interesting experience or an exceedingly unpleasant one, depending on the species and age of the animal, and its disposition at the moment of encounter. In the case of grizzlies, the best one can say about it is that it is an experience of some uncertainty, and when a tramper is burdened with a heavy pack, one of some concern. It is in relation to camping, however, that the bear is the major problem. To make full and most enjoyable use of the trail system in the Park, the through-tramper, if he plans to spend any considerable amount of time, needs to have camps of several days' duration, in order to carry out some tramping on side-trails to interesting spots, or to vary an otherwise solid regimen of backpacking, or to wait out inclement weather. Some campsites are furnished with bear-cans, although in some of the larger areas these cans are so removed that, unless one happens to be provided with a map of the particular site, he may be completely unaware of their presence. The cans are a considerable help, since they allow one's food to be protected during absences from the campsite. They are not necessarily a protection against a bear who is malevolent, and tears things up simply for the fun of doing so. In my own experience with this kind of bear, I was fortunate in that my equipment, or some of the essential equipment, wasn't destroyed beyond use, since my encounter with the bear occurred midway on my tramping program. The bears are spoiled by their contact with tourists on the highways and in the auto campgrounds of the Park. They are hardly to be blamed if, having been conditioned to an easy mode of nourishment, they practice these techniques upon campers on the trails. One could ask, however, why the bear? The thought arises whether or not *one* park (i.e. Yellowstone) cultivating bears for the amusement of tourists is not enough.

BENTON L. HATCH

PERSONAL ITEMS

Reginald Aldworth Daly, one of America's outstanding geologists and for thirty years Sturgis Professor of Geology at Harvard, died recently at the age of eighty-six. Professor Daly will long be remembered by mountaineers for his work while on the International Boundary Survey from 1901 to 1907, when he brought order out of chaos and set up the classification of the multitudinous ranges which cross the 49th parallel, a classification which we still use today. While parts of the great American cordillera are fairly easily identified and classified, the ranges become more complex as they trend northward and cross the international boundary into Canada. Professor Daly's work in combing the previous literature and checking in the field, resulting in a sound classification based on physical and structural factors, will earn him the thanks of mountaineers, geologists, geographers and physiographers.

KENNETH A. HENDERSON

WHITE MOUNTAIN QUIZ NO. 6

Watersheds[1]

(Answers will be found on pp. 575-6)

1. A drop of water falls on Mt. Washington. Assuming it immune to evaporation, mention the succession of rivers (two or three in each case) by which it will be carried to the ocean, supposing that it falls a) on the S.E. slope, b) on the N.E. slope, c) on the W. slope.

2. How many different main watersheds, or distinct drainage systems, are there in the White Mountains, meaning by "distinct systems" such as are drained to the sea by distinct trunk rivers, rivers which do not meet short of the ocean? Identify these systems by naming the trunk river of each.

3. What two main watersheds, as identified by their trunk rivers, are separated by the following notches?

a) Carrigain
b) Carter
c) Crawford
d) Dixville
e) Franconia
f) Pinkham

4. Do the following notches separate A) two different main watersheds, or B) only two branches of the same main watershed?

(1) Bear Mountain, (2) Bunnell, (3) Carlton (Crescent Range),
(4) Grafton, (5) Hancock, (6) Jefferson, (7) Mad River,
(8) Perkins, (9) Sandwich, (10) Zealand.

Note: There are five of each kind.

5. a) What notch or gap, named or unnamed, is unique in that it provides the only direct connection for travel between a certain two of the main watersheds?

b) What one separates waters which reach the ocean at the greatest distance from each other?

6. a) How many triple-divide peaks are there, meaning by a "triple-divide peak" one which lies at the junction of three main watersheds? Name or locate these, and for each mention the three watersheds involved, as identified by their trunk rivers.

b) Is there any quadruple-divide peak? If so, name or locate it.

7. In each of the following cases one of the two peaks mentioned lies on a principal divide (a divide between main watersheds), while the other does not. Select those of the first kind.

a) Passaconaway, Tripyramid
b) Garfield, Liberty
c) Bond, Guyot
d) Tom, Willey
e) Clinton, Jackson
f) Adams, Sam Adams
g) Middle Carter, Wildcat
h) North Baldface, South Baldface

8. Beginning at Moosilauke, on the west, and ending at Speckled Mountain, Maine, on the east, outline the course of a trail which

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[1] Apologies are made for the present quiz, which really is a "stinker". The difficulty, however, lies in the subject-matter itself. It is recommended that anyone caring to occupy himself with it should permit himself the use of maps, at least for the last four questions. Furthermore, the answer to Question 2 must be checked before the succeeding questions can be tackled with profit.

shall follow principal divides all the way. (Outline this course by mentioning, in succession, the peaks or ranges, and the notches, which the trail will traverse.)

9. Beginning at Mt. Israel, on the south, and ending at Milan Hill, on the north, outline the course of a trail like the preceding.

ROBERT L. M. UNDERHILL

SCIENCE

Some Adirondack summits have changed their altitudes as a result of the recent re-leveling of the U.S. Geological Survey. The order of precedence of some of the highest peaks has been changed and several of the changes have been of substantial proportions. The new heights are compared below with those previously assigned.

Mountain	*Present Height*	*Former Height*
Marcy	5344 feet	5344 feet
Algonquin	5114 feet	5112 feet
Haystack	4960 feet	4918 feet
Skylight	4926 feet	4920 feet
Whiteface	4867 feet	4872 feet
Dix	4857 feet	4842 feet
Gray Peak	4840 feet	4902 feet

KENNETH A. HENDERSON

HISTORY

Thoreau's Sister in the White Mountains. Among the manuscripts of Henry David Thoreau that have been collected at the Henry E. Huntington Library in San Marino, California, there is a leather-bound commonplace book with marbled covers (HM 957). Early in the eighteen-forties Henry Thoreau entered extracts from various poets and a chronological list of English men of letters in this book; then, despite the many unused leaves that remained, he laid it aside, never to use it again. As did all of his other manuscripts, this book came, on Henry's death, into the custody of his sister Sophia, who discovered the blank pages and decided to put them to use. In this fashion, there has been preserved an account of the White Mountains in 1870; for, on eleven of the unused pages of the book, Sophia Thoreau wrote a diary of her journey to the summit of Mt. Washington. Through the courtesy of the Huntington Library and the Librarian, Mr. Leslie E. Bliss, that diary is here published from the original manuscript.

Except for a brief period when she taught school in Roxbury, Sophia E. Thoreau (1819-1876) passed most of her life quietly and obscurely at the Thoreau home in Concord, Massachusetts. After the death of her brother Henry in 1862, however, she undertook the responsibility of editing and supervising the publication of his literary remains, which today constitute the bulk of his writings. Her diary is the perfect mirror of her personality.

The diary is here printed complete, and exactly as written except for some changes in punctuation and capitalization, and the correction of a few obvious lapses in spelling.

CHRISTOPHER MCKEE

Thursday. Aug. 4th. 1870. I left Concord in company with Miss Jane Hosmer, a very warm Thursday morning at quarter past seven. We reached Springfield at noon, where I was introduced to Mr. and Mrs. [James L.] Bagg from Syracuse, N. Y.

After dinner a little shower came to refresh us, and at five o'clock Mr. Sanborn[1] called with a carriage to show Miss H[osmer] and myself the city. We enjoyed a drive of two hours, visiting the arsenal—cemetery—riding through some fine private grounds, and getting glimpses of the river and surrounding country, also many delightful residences. Our party stopped at the Massasoit House, where every luxury abounded—lovely bouquets ornamented the tables, as well as the most beautiful fruits, so that one could refresh themselves, and let slide the entrees. Upon retiring, a new symptom in my case occurred, which for a time alarmed the party and I went to bed believing that I had reached the end of my journey.

[*Friday. August 5th.*] After a night's rest, however, I resolved to go on. Miss Ina Bagg joined us at six the previous evening. We left Springfield at eight in the morning, reaching Littleton at six, after a most delightful ride over the Conn. & Vt. Valley R.R., passing through Bellows Falls, Charlestown, Windsor, etc., etc., where the scenery was most charming. Arriving at Littleton, we took a crowded stage with six horses for Bethlehem, a distance of five miles, which it took two hours to accomplish. There were grand mountain views on our route, and familiar flowers smiled upon us by the road sides. *Epilobium angustifolium* abounded everywhere, a little past its prime, Golden rod—*Gnaphalium—Mimulus* also.

We found good accommodations at the Sinclair House. Had quite an amusing time trying to escape from our room in the morning, not being able to unlock the chamber door. I dropped the key out of the window and a servant came to the rescue. In explaining to me the way to unlock the door, he fastened himself in, much to his own confusion and the amusement of the young ladies who had concealed themselves in the trunk room—escaping from their beds as he approached. I rose early and enjoyed seeing the sun rise from behind the dark mountain peaks.

Saturday. [*August*] *6th.* The day was perfect, and about eight in the morning our party took seats in a team procured at the hotel with a very obliging driver, thoroughly kind to Billy and Jerry, our strong bay horses, as well as to his passengers, and turned our faces towards the Flume in Lincoln, distant sixteen miles.

Our ride through the woods was very charming. We were continually excited by glimpses of the Franconia range, Lafayette, the Haystack [Mt. Garfield], and Cannon. Fruits and flowers adorned the road sides and numberless springs kept them ever fresh. We often tasted the cool water of the mountain torrents. The first place of interest at which we stopped was Echo Lake. There we found a party sailing upon its waters and others sounding horns to get the echo. Our shouts were responded to, and we were so fortunate as to see an eagle, like a black speck, soaring high above us. It was not far from noon when we reached the Basin—a great granite bowl, filled on one side with garnet-hued water and dashing white foam on the other. Here we dined, scarcely able to hear the sound of our voices through the roaring torrent. The Basin is 40 ft. in diameter, its overhanging edges are fringed with rich mosses. We next proceeded to Profile Mt., with its pretty lake at its base.[2] The sides near the summit were covered with stunted fir and spruce trees.

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[1] Franklin B. Sanborn, Thoreau's biographer.

About 3 o'clock in the afternoon we arrived at the Flume. Our way lay along the bed of the stream, and we walked on bare granite rocks, the torrent tumbling along on our right, until we reached a platform helping us over the jagged rocks, the walls of rock narrowing to eleven feet. The air was chilly like a cellar and we were glad [to] climb the steep sides, rich with mosses and ferns, and cross the bridge above the great rock, weighing 50 tons, which is wedged between these perpendicular walls. On our way to the Flume we enjoyed a view of Profile Mountain with its lake at the base. We visited the place where trout are bred in large numbers.[3]

Near the Flume House we left our carriage and followed a little foot path winding through the woods over fallen trees—green with moss and ferns, for half a mile or more and reached a pool where [there] was an old man who sold us a ride in his boat. He had lived 17 y'rs in this retired spot and had gone crazy upon cosmogony.[4]

Sunday. Aug. 7th. A beautiful day. In the morning I wrote to dear mother. In the afternoon, Mrs. B[agg] being sick, Miss H[osmer], Ina and myself drove to Whitefield, eight miles from Bethlehem, and had a charming view of [the] Carrol or Cherry Mts. The next day we went to Swasy farm,[5] seeing the Lafayette range to great advantage. We trimmed our carriage at Whitefield with Tansy, golden rod, Sunflowers and balm. Returning from Franconia we used running Pine and birch bark, making bows and ringlets to decorate ourselves, and carriage, and horses.

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[2] This is obviously an error. Since the Basin lies some three miles south of Profile Lake, the party, in traveling from Bethlehem to the Flume, would have passed Profile Mountain before reaching it.

[3] "Near [Profile Lake] and [the] road are the houses in which the trout are bred, where many hundred young fish are kept. The tourist will doubtless be interested to inspect them and observe their tameness." M. F. Sweetser, *The White Mountains: A Handbook for Travellers* (5th ed., Boston, 1884), p. 261.

[4] Each summer, from 1853 through 1887, John Merrill, "The Man at the Pool," could be found there, ready to row visitors around it in a crude boat. As his boat circled the Pool, Merrill would expound his cosmogony, its principal tenet being that the earth was flat. Theories such as this he explained to his passengers by means of a large chart painted on the wall of the Pool, at the righthand side of the cascade. The fare for a ride in John Merrill's boat was only a dime, but it is thought that his insanity and his cosmogony were partially feigned for the sake of securing a more substantial fee from his patrons. He seems to have been successful, for a summer's income was sufficient to support him during the winter months which he spent in Wisconsin.

[5] On the Gale River Road, which branches south from U.S. 302 about 500 yards east of the hotel at Maplewood. The old Swasey place is the second house on the lefthand side of the road (disregarding any Maplewood property), about a mile and a half south of U.S. 302.

Tuesday. The 9th. We bade farewell to Bethlehem and drove to Marshfield, the railroad station at the base of Mt. Washington. The day was very warm and the distance to M[arshfield] some 18 or 20 miles. I shall never forget the beauty of the forests through which our road lay. The fallen monarchs hoary with usnea, their massive trunks green with mosses—the beginning of new forests. Some old mills on the Ammonoosuc were very picturesque. We stopped at a cottage by the road side and took a lesson in spinning, and the day we drove toward Whitefield we visited a school with 16 pupils.

It was half past two o'clock when we reached the station, and ordered dinner. Not a habitation was in sight from this point, no paint adorned the house, and a strong scent of pine pervaded the air. Mr. Bagg telegraphed to the superintendent at the top of the Mt. to know if our party could be taken up that night, and got a favorable response. After dinner we examined the engine and car and were told that there were eight brakes, cog wheels and a cog rail on the track between the other two—the engine is not attached to the car. A part of the rails are laid upon trestles built over the ravines, so that you look down 40 or 50 ft. as from a high tower. A part of the way, the sup't told us, one end of the car would be *eleven* feet higher than the other. After dining I was disturbed by a fit of indigestion, from which I found relief by following the advice of my wise friend Mrs. B[agg]. It was not far from six o'clock when we commenced the ascent of Mt. Washington.

We were told that it had proved the warmest day known for 15 or 20 years at the base of the Mt. The outline at the summit was very distinct against a clear sky and we in our ignorance anticipated a bright night. A Mr. [Daniel R.] Melcher of Cambridge joined our party, and with few misgivings evidently, we said good by to Mr. [John W.] Dodge, the pleasant Supt., who said much to allay the apprehensions of the timid. None but cold-water men are employed on this road. The brakeman took his stand with folded arms under a placard on which was printed, "All communication with this man is strictly forbidden." All shouted at once, calling attention to this, that, and the other object of interest, highly enjoying the scenery until we were about two-thirds of the way up, when suddenly we passed into a thick cloud entirely shutting out all prospect—drawing our shawls and water proofs about us, we huddled into the middle of the car and raised our umbrellas. The conductor spread over us a rubber blanket, and we lay like a brood of chickens, only peeping as a rude gust lifted our blanket. Upon reaching the station at the top at eight o'clock, a mountain giant appeared with his lantern in hand—showing through the mist an immense pair of boots, and really that was all I saw of him, so thick was the cloud that enveloped us. The big man lifted us from the car to a narrow platform, and then told us to follow him, which we did over black and jagged rocks with little pools of water glistening in the hollows, a strong *cold* wind blowing, for we found the thermometer at 47 —the rain still pouring. During our walk of a few rods from the station to the door of the Tip-Top House my sense of desolation was utter.

Our arrival being anticipated, we found good fires and a supper in readiness. The latter I ignored, but rejoiced to drying garments. We found a small party gathered for the night, among them a young man from Concord. I am almost ashamed to confess that I purchased an envelope and note paper, both stamped with the Tip-Top House, and wrote a letter to friends in Bangor. I was disgusted the next day, in bright sunshine, by seeing parties on the instant of their arrival rush to the desk and seat themselves for letter writing, as if that were the object of their ascent. The thick darkness was my apology, for if the moon and stars had not been obscured I certainly should have devoted myself wholly to the mountain. A little past ten o'clock our party retired. It was like being at sea in a storm. The sleeping rooms were very small, only large enough to contain a low post bed, a wash stand and one chair. Four small panes of glass in the slanting roof admitted the light, everything seemed damp and a peculiar odor brought to mind a tomb. I did not sleep at all during the night but contemplated my exalted position.

[*Wednesday. August 10th.*] At four o'clock in the morning I came down stairs and found Mr. Bagg already below, looking in vain through, or rather at, the mist to catch a glimpse at the sunrise. After breakfast we occupied ourselves looking at stereoscopic views. About ten o'clock the sun appeared and, putting on our wrappers, we all seated ourselves on the dark rough slate rocks of which the summit of the Mt. is composed. We found ourselves looking down upon clouds, through which as they moved the solid mountain peaks appeared—a most wonderful and glorious prospect it was. The party, with the exception of Mrs. B[agg] and myself, took a guide to lead them into Tuckerman's ravine, down the south side of the Mt. We explored the summit, finding the *arenaria glabra* in abundance, a most delicate looking plant to thrive in the crevices of the cold dark rocks. The *Potentilla Tridenta*[*ta*], *Vaccinium, Arnica* and several other plants surprised and pleased us. After dinner, while we were near the R.R. station, Mrs. B[agg] greeted some friends who had just come up by the carriage road. Our friends from the ravine appeared, much fatigued. At five o'clock we took [the] carriage road to the Glen, rode *eight* miles to descend one. I cannot describe the beauty and grandeur of the views in the distance of surrounding mountains, and of the mountain sides, sometimes looking over large forests which the cold had destroyed, leaving only the ghosts of trees, and then upon prostrate trees clad in the richest green mosses, little rills trickling down the dells filled with luxuriant ferns and brakes.

We saw the mountain currant, some girls were gathering the fruit and they brought some to the stage window for us to taste. It was too wild and bitter, as well as acid, to deserve praise. The mountain ash, spruces and firs prevailed.

At the Glen House we found 500 guests—human butterflies dressed at the height of the fashion, tripping to the music of a Boston band. I was made to feel the truth of the old adage, "There is but a step from the sublime to the ridiculous." I was glad that I ascended the mountain from Marshfield, where only the railroad station and a rude inn for the accommodation of travellers was to be seen, the prospect wild and dreary. At the Glen House I met several acquaintances, among them my old school teacher Mr. [Phineas] Allen.

Thursday. [*August 11th.*] After breakfast we took a wagon and drove to [Glen] Ellis Falls about four miles distant—visited the Crystal Cascade and Emerald Pool. In the afternoon we enjoyed a pleasant stage ride to Gorham, where we parted from Mr. B[agg] and family. Miss Hosmer and myself spent the night at G[orham], taking the three o'clock morning train for Boston, reaching Concord Friday afternoon.

Thus ended a most memorable journey.

H. S. Jewell, Survey Chief for the Boston and Maine Railroad in 1912, who is mentioned in C. Francis Belcher's article, "Trolley on the Presidentials" (APPALACHIA, June 1957, 320-8), gives us some further notes on that enterprise (recorded):

(The disappearance of Keenan.) After dinner sometime they telephoned down from the Summit House and said, "Jewell, that new fellow you sent up here, we lost him." "Well," I said, "stay up there until you find him." I didn't think too seriously of it. Those fellows generally take care of themselves somehow and I couldn't imagine one of our crowd getting lost up there. But later I had to think of it more seriously.

They had been right out in the open between the summit and the Lakes of the Clouds. Keenan had been left as a back-flag—when they had a point off somewhere they would leave a man with one of those colored surveying-rods so they could sight on him and turn their angles and whatever they were doing, and carry on their lines from there. And then this fog came in. When the fog comes in up there, it strikes you suddenly; you can't see anything and you don't know where you're at. The boys told me they figured it would blow away and they would just sit down and wait. But after a while they began to think it was hopeless —it began to get cold, too—and they hollered to Keenan to come in. He had been well within calling distance. One of the boys went back and found the point where he had been at. Then they shot off their guns. It sounds kind of western to tell it now, but they all carried guns. In those days there was game everywhere. They shot their guns several times and nothing happened. Then they began telephoning me. When it became dusk I made arrangements at the Base Station boiler-house to have the steam whistle blow every minute all night long, which they did. And over on the Ammonoosuc we put out lanterns, strung all around camp, thinking that if he had any sense he might follow a stream down. Then we began to worry. I sent a wire into Boston and I got a reply, "Spare no expense. Find the boy." The next day the boys went up on the summit again and hunted. And I telephoned over to Gorham and got a one-armed guide[1] who was very good. I told him to get all the woodsmen he could find. They started from the Glen House. I saw fifty men go into the woods—and I saw fifty come out. They'd been all over and there wasn't a sign of Keenan anywhere. Later I had half a dozen woodsmen working on full time.

Then the reporters began to come in and there was more or less—I won't say confusion–but they were swarming everywhere, looking for news for the Boston papers. A reporter's sole thought is news, and of course there wasn't any. They offered me all kinds of money, after we had been searching for some days, to go off and get lost for a week myself, so they could put it in the papers that even Jewell got lost on the mountains and then came straggling in. I was disgusted with that. Then one of them said that he'd been off on the search himself, looking around on the mountains, and he'd been attacked by a wildcat.

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[1] Guy Shorey of Gorham, who took part in the search, says this guide was Burge Bickford. The June 1958 APPALACHIA will include an article by Mr. Shorey on his experiences in the White Mountains forty and fifty years ago.

I think it was through the reporters, somehow or other, that there came a rumor that Keenan had been seen over on the highway to the east. They thought it would be something to talk about. Of course we chased everything down and I'd send men off anywhere that we got any kind of a report. But I made up my mind that there might have been truth in this one or there might not.

For the better part of three weeks we searched. We did a good job, spent plenty of money, and finally we brought the men in. It was late in the year–October–for that country up there. It got to be pretty rugged. The day before we broke up camp I sent a party up onto the mountain. There was so much snow they had to walk up and walk down and probably they did only 15-20 minutes' work while they were up there. But we were tying in a line that was necessary for us before we could go in.

After we came back from the mountains there was a rumor that Keenan had been found in the St. John Hospital in Montreal. So I had to go up to Montreal on the train, and a nice big sleigh with a big robe took me to the Windsor. I made my search immediately and there was nothing to it in any way, shape or manner.

(The trolley and the A.M.C.) The A.M.C. played quite a part while we were up there. I don't recall who the man was from your Club, but sometimes he used to come up there with Mr. Shepard–and whenever *he* wanted to come he'd take a private train, with a sleeping car and a diner and a colored porter, of course. Often Mr. Holbrook would come too. He was the contractor and it was understood that he was going to have the job. Well, now, your Appalachian Mountain Club was very much incensed at the thought of this trolley going up there and leaving a scar along the mountain. They didn't like that. So whoever it was would come up there and meet Mr. Holbrook and me, and sometimes Mr. Shepard would be there too. I remember sitting there in the train at night with a grog, and they would talk over how the stones would be lifted, jacked up out of the way, and then put back. I was supposed to understand that no rock of any size would be turned over; that the lichens would all be left outside–on top. Well, that wasn't too bad, because Holbrook, Cabot and Rawlins were the outfit and they could lift those stones with cranes and that sort of thing. On the other hand I, who was to be on the actual construction, realized that if they did much blasting up there the A.M.C. might have been a little bit disappointed. But even so, I can't visualize that it would have been a scar for very long. And I know they were very much in accord with the A.M.C. and would have been only too glad to please whenever there was any possible way of doing it.

(Marking the route.) How did you mark the route above timberline? Would there be any chance that the marks that you put in would be there today?

Oh, yes, undoubtedly. They were all drill-holes. And some of those rocks up there and some of those ledges, I don't believe anybody's moved them from the day we were up there. We put the holes in sometimes quite often, perhaps 25 or 30 feet apart. And whenever we could, we'd put in three more points referencing the main point. We used just a small drill, perhaps 3/8-inch, and they were drilled down in just enough to make a hole, perhaps a quarter to a half-inch deep. I imagine you could go up there and find point after point, especially on that hotel. If I had my old survey books and I once found one or two holes, we could go over the whole business very easily.

(Life at the Base Station.) We had a nice camp there at the Base Station, very comfortable. It was a wooden building with a large lobby, so to speak, and twelve to fifteen rooms. Of course there was running water out of the Ammonoosuc, and they threw steam into it from the engine house.

We didn't have much pastime up there. It was either work or rugged play. It was cards, shooting, hunting. We were playing cards a good part of the time. There'd be some rough fellows who'd get mixed up in a poker game and lose more than they ought to, and I'd have to straighten that out and get some of their money back to them. You can imagine my time up there with twenty-one wild Indians. Keeping them rounded up was quite a job. That was a rugged bunch, and I don't mean maybe; it was rugged. Everybody had guns. Nobody ever got into any trouble with them, the way they're doing nowadays. It was just a matter of having them, that's all. We'd put up a target and have so many shots for a quarter or so, and whoever got the best record might take a little kitty or something of that nature.

We had all sorts of game. We jacked deer at night. In those days the deer were so thick up there that nobody cared. One of the boys shot a 600-pound deer one time. You might just as well try to eat your shoes. But it was nice to have a chance to get away from the beans.

In the old days the carpenters and railroad men up on the mountain had built themselves some little scooters to slide down the rails. These had been taken away from the carpenters and hidden in a loft. Well, my gang got hold of them. They'd come down the mountain on one of those darn things at sixty miles an hour, like lightning. No, they never got killed. You couldn't kill the bunch I had there. But I had to take those scooters away from them.

Then Mr. Shepard, who was chief engineer, decided that I could have an automobile so we could get back and forth to Fabyan's handy, without a big railroad engine. One of the officials of the railroad had an old Winton car—I guess it wasn't much good anyway—a big, rangy thing. So they sent it down to the Concord shops and put railroad wheels on it. That Winton automobile came back up and we stored it at the Base. The darn thing was out of whack so much we had to have one of the engineers or firemen on the Cog road take care of it for us. After supper the boys would get that thing out and start down the track. They'd travel that six miles to Fabyan's at sixty or seventy miles an hour, wide open, right through the night black as your hat. I went down just once, but then I figured that the railroad needed me up country more than they did in the blooming car.

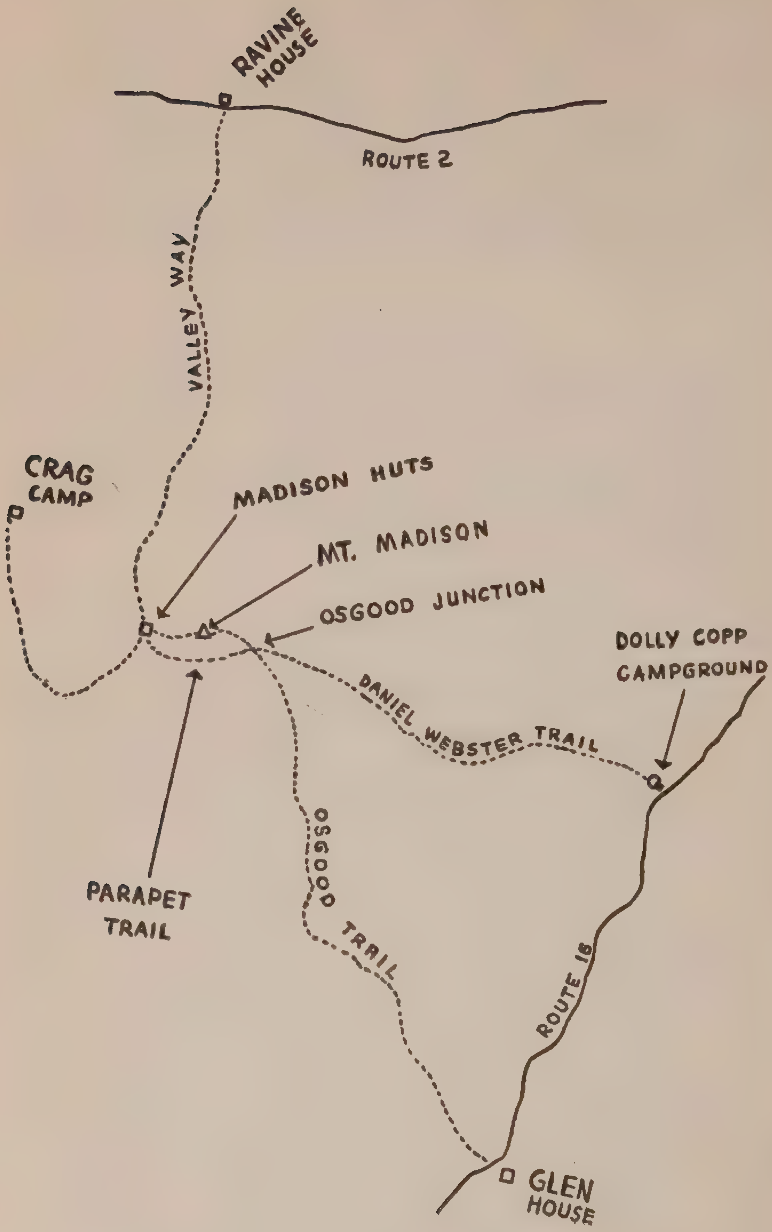
That was the last job I did for the Boston and Maine and they sure did spend money. When I took my wife once to the Mt. Madison House in Gorham, Shepard says, "I've got no objections to paying your wife's hotel bill, but for heaven's sake put her down as another engineer."

One day on the piazza of the Fabyan House I was talking to the wife of one of the railroad officials and she said, "Mr. Jewell, isn't that a beautiful sight? That whole mountain up there is just like a paisley shawl. You don't seem to enthuse too much. Don't you think it's beautiful?" I answered her, "It's very, very pretty, but it's a heck of a place to build a railroad."

ACCIDENTS

Thomas Hooker Flint, 21, of Concord, Mass., a Harvard junior and a member of the A.M.C., died on Mt. Madison on Sunday, June 2, 1957. Flint was a White Mountain climber and camper of considerable experience. He had been accompanied on the climb by Edward K. Snow and Burton M. Perlmutter and we print first, in full, the written statements that these two men made to the State Police on the following Monday afternoon.

Statement of Edward K. Snow. "I went first to Burton Perlmutter's house Sat. morning in Watertown, Mass. Then from there to Tom's (Flint) home in Concord, 1 p.m. This was the first time I had met Tom. Then we came up to the mountains to the Dolly Copp picnic area at about 6 p.m. By this time we had planned to climb Mt. Madison. We spent the night at the picnic area. Then the next day, June 2, on Sunday, we packed our gear and started up the Daniel Webster Scout Trail. The weather was cloudy and a slight drizzle. Burt lagged most of the way. I was leading and most of the way alone. At the tree break, Tom (Flint) and I changed packs. He taking my poncho and I his raincoat. By this time it was raining hard and as we descended the rocks, a wind started. Light at first then it began to build. Just before we reached the Osgood Junction I stopped to talk to Tom (Flint). He was worried about Burt, so we called for awhile. He noticed my shivering and suggested I go to the shelter. The fog was very intense and the wind blowing very hard. I had been briefed beforehand to follow the cairns so I moved from one cairn, over the Osgood Trail, to the other until I had reached the shelter. The going down the summit was very slippery, but I had a good pair of boots and managed quite well. When I arrived at the shelter, I found I was very poorly prepared. I didn't have any matches so I stripped off my clothes and huddled in some blankets I found. At this point I became ill. I experienced cramps and chills. After about 15 minutes Burt came. I then crawled into a sleeping-bag he had. The time was about 3 p.m. I then vomited and the cramps continued. They lasted most of the afternoon. Burt had a fire going and we had some soup. We were very concerned about Tom. Then Burt suggested that he (Tom) would probably have gone down in search for him. This


RAVINE HOUSE
ROUTE 2
VALLEY WAY
CRAG CAMP
MADISON HUTS
MT. MADISON
OSGOOD JUNCTION
DOLLY COPP CAMPGROUND
DANIEL WEBSTER TRAIL
PARAPET TRAIL
OSGOOD TRAIL
ROUTE 16
GLEN HOUSE

eased our minds. Because Tom was experienced we figured he might have returned to a lean-to we had spotted near the timberline. It was very late at this time, about 5, and it was already getting dark. I was feeling much better. We fell asleep at 9 o'clock and slept until 7.30 a.m. Monday, June 3rd. We ate peanut butter and carrots and proceeded up the mountain via the Osgood Trail. About half-way to the summit we found Tom's body. Burt felt his pulse. There was none. He was lying face down with the upper part of the body twisted so his face was in the rocks. We covered the body with a maroon sleeping-bag and started down at 8.15 a.m. We arrived at the car at about 12.30 p.m. We drove out and arrived at Pinkham Notch. Tom Flint was wearing a gray and red coat and dungarees and oxford-type shoes. It was my first mountain trip."

Statement of Burt M. Perlmutter. "Ed Snow arrived at Watertown at about 10 a.m. Saturday, June 1. Packed gear and left for Concord. Arrived at Concord, Mass. about noon and ate lunch at Tom Flint's house, then left for New Hampshire. We left no word as to where we would climb. When we arrived in the White Mountains, about 6 or 6:30 p.m., we planned to spend the night at Dolly Copp Camping Grounds and to climb Mt. Madison the next day. Sunday, June 2, was cloudy but the weather report on the car radio said just light rain. We started climbing between 8:30 and 9 a.m. After we climbed for a short while on the Daniel Webster Trail it started to drizzle. We put on our ponchos. I was constantly falling behind and Tom and Ed had to stop and wait for me. When I got above the treeline there was no sign of either Tom or Ed, but I kept going. In an occasional mudspot I saw their footprints and knew they were ahead of me. When I arrived at the Osgood Junction, I still saw no sign of them. I read both signs and decided that because of the wind and the rain, the Parapet Trail around the summit was better than the Osgood Trail over the summit. I did not know which trail they had taken. The wind was high and I was thoroughly soaked and chilled. When I arrived at the A.M.C. hut about 3 p.m., I found Ed half undressed and shivering and sick. I lit a fire with the available wood and got Ed into the sack. He was throwing up and he told me his muscles were all knotted. He also told me that Tom had waited for me and should be along shortly. I took off my clothes to dry them. When Tom didn't show up I checked out-of-doors but the fog was so heavy that I couldn't see any of the trails. I was still chilled and Ed was sick, so I was afraid to leave because I didn't know any of the trails and I couldn't see the cairns because of the fog. The next morning we awoke at 7:30 a.m. and ate a cold breakfast and started out about 8. About fifteen minutes above the hut on the Osgood Trail we found Tom. He was cold and stiff and his eyes were glazed. I could just barely see his eyes in the position he was in. He was on his back, but his torso was twisted and his face was down in the rocks. I covered him with a sleeping-bag and we continued down the same trail we came up. We didn't know the other trails and the map was in Tom's sack, which wasn't with him when we found him. We didn't locate the sack later either. As soon as we reached Dolly Copp, we drove to Pinkham Notch and reported the mishap to Joe Dodge about 1 p.m.

"When we found Tom he was wearing Dungarees, my wool jacket and oxford shoes, which is what he started out with. He had a cut on the back of his head, but I couldn't determine the seriousness of it.

"My mountain climbing experience includes about 3 or 4 one-day trips while a camper at Indian Acres in Fryeburg, Me., a trip with my brother, who is an avid and experienced climber, and a trip last spring after school with Tom. My trip last year with Tom up the Aminoosik ravine was the first time that I'd stayed overnight in the mountains."

It may be added that State Trooper Charles Aspinall examined the two boys at this time, without, however, eliciting any further important facts.

But as these accounts were written under great emotional stress, on the very day on which the accident was discovered, it is understandable that they should not be complete and coherent in all respects. Later the statement was made to Thomas Flint (Flint's father) that young Flint accompanied Snow, who was ill and suffering severely from the cold, to the hut, and then went back with the object of meeting Perlmutter. This addition is very welcome, as it straightens out several matters in these accounts—and in these accounts taken together with the succeeding ones—which would otherwise be very puzzling indeed to any experienced climber familiar with the region.

The following statements are necessarily much abbreviated.

Statement (tape-recorded) of Thorn Dickinson, retired civil engineer, who was staying at the Glen House. "On Monday morning I left the Glen House about 8:30 and reached the top of Mt. Madison a little after 12. I did not see Snow and Perlmutter; they had gone down before I came along. Just over the summit and very close to it, I found a pack. It had not been just dropped but was carefully placed against the side of a big rock. I went down the trail and about one-third of the way from the summit to the Madison Huts I saw the body. I was the first disinterested person, as you might say, to do so. It was lying face down on the trail with the head towards the mountain as if he had been going up. At least, that was what I supposed. I found he was stiff, cold and obviously dead. There was a red sleeping-bag lying over the body which I pulled back so that I could see. His face was almost directly down and the head was a little tilted back. I noticed that his face was scarred in many places, on both sides and the forehead, and from that I supposed that he must have fallen several times. But that is merely a supposition. He had no pack with him.

"I saw the two boys [Falk and Clifton] as I was going down to the hut. They said they would look after the body, while I headed back to the Glen House, down the Madison Gulf Trail, to get help. None of us knew that there had been companions.

"On another day shortly afterwards, on my way to Mt. Adams, I went over the Parapet Trail, but I didn't save any time doing it. It is so rough and with so many boulders lying around that it takes just as much time as to go over the summit of Madison."

Letter from Sigo Falk. "On Monday, June 3, 1957, Roger Clifton and I went from Crag Camp, where we were staying, up Mt. Adams and down to the Madison Huts. As we were leaving there to climb Madison an elderly man [Thorn Dickinson] called to us. After hearing his story we agreed that while he went down to the Glen House and reported the death we would try to move the body down to the huts. After a few minutes' climbing we reached the body, but continued on up. About thirty yards from the summit, on the west side, we found the packboard leaning against a rock. The gear was light, probably around 25 pounds. The name "Perlmutter" appeared on much of the gear. We then carried this down to the body.

"Flint was lying with his face and chest down, wedged slightly between two rocks. At his waist there must have been a 180° twist, since his lower half was up. His face was cut and dented badly."

Falk and Clifton were unable to bring Flint's body down to the huts but placed it *within* the sleeping-bag and so left it.

The pack mentioned in the two foregoing accounts was later brought down to the valley by the rescue party and identified as Perlmutter's. This was explained by Perlmutter, who stated to Joe Dodge that he and Flint had changed packs on the way up with the idea that a lighter load (Flint's pack) might enable Perlmutter to keep up with the others.

Statement of N. H. Conservation Officer Paul Doherty. "Joe Dodge telephoned me about 2 p.m. on June 3 concerning the accident to Thomas H. Flint. At 3.30 a party of 18 soldiers from Camp Dodge, led by Lt. Lerner, U.S.A., U.S. Forest Ranger Richard Goodrich and five employees of the Forest Service, and I were assembled at the Ravine House in Randolph.

"Reaching the Madison Hut, most of the group took time out for lunch. Ranger Goodrich and I, accompanied by several others, continued up the cone of Madison and located the body. Observations as to what had taken place were impossible due to the fact that another party of climbers staying at Crag Camp had put the body into a sleeping-bag with the idea of carrying him to Madison Huts. This changed the picture as to just where Flint had fallen, in what position his body lay and any other on-the-spot details connected with the accident. [Falk, however, had photographed the pack and the body before moving them.]

"The dead man was lashed to a stretcher and the party started down the Valley Way to the highway in Randolph. The going was slow due to the rutted condition of the trail in spots. It was 1 a.m. before the body was loaded into the ambulance. The dead man was viewed at the funeral home in Gorham by Coos County Medical Examiner Dr. L. P. Beaudoin of Berlin. Dr. Beaudoin pronounced the victim dead, with death resulting from exposure to the elements after a fall which caused unconsciousness. Dr. Beaudoin described Flint's injuries as severe abrasions of the nose and upper left eyelid, lacerations on top of the skull, a deep tear on the right eyeball, minor abrasions on both hands, and discoloration of the body due to cold temperature conditions."

Statement (tape-recorded) of Joseph B. Dodge, who was the first person to discuss the accident at length with Perlmutter and Snow and who did so for several hours.

"We first learned about this on Monday noon, about 1 o'clock. I was in the office down there when these two boys [Snow and Perlmutter] came in. They told me they had an accident to report, that one of their partners who started the climb with them yesterday was dead up on Mt. Madison. They said they started out from Dolly Copp in what they called a drizzle. Well, it started to rain here vigorously shortly after 7 and we had nearly ¾-inch of rain until it stopped about 1 p.m. The last record of rain on the summit of Mt. Washington was at 1.50, although the mountains were in fog after that. The wind at 12 o'clock on the summit was from the west. The windshift came between 1 and 2, when it swung into the northwest. The velocity was 22 miles per hour at 2 o'clock and 27 at 3. So it wasn't a severe day as days go, and it's hard for me to believe that this boy died mainly from exposure Sunday afternoon. Because the temperature was never low enough. But there was plenty of wind there to cool anybody off markedly.

"The first thing I did was to telephone the Army camp down here and request some men. I tried to get hold of the Forest Service in Gorham but the line was busy, so I got Paul Doherty. Then I got hold of the Forest Service later and talked to Ranger Goodrich. Doherty and Goodrich got together and started up the mountain with the men from the Army camp. Perlmutter and Snow stayed right here. Later they gave their statements to Charley Aspinall of the State Police.

"That evening I went over to Randolph and was there when the body was brought down. The only ones who witnessed the body that night over in Gorham besides the coroner and the undertaker were Doherty, the State Police and myself. That was about 2 o'clock in the morning. The one thing that impressed me most of anything was that the insides of his hands were just as clean as mine were, while the backs were all battered up. I had asked the boys what the apparent injuries were and they said the only thing they saw was a little hole in the back of his head. The doctor probed around at that hole and there wasn't really any hole there. The skin was hardly broken."

For lack of space we omit the report of the State Police Trooper, who interviewed Perlmutter and Snow about 4.30 Monday afternoon at Pinkham Notch Camp, and of Ranger Goodrich. While this latter is very valuable in regard to some details, it sheds no additional light on the fundamental causes of the accident.

Just how and why this accident occurred we shall probably never know. Several details in connection with it are difficult to explain. Our own conjecture—and it is only a conjecture—is that Flint went back over the summit, perhaps even as far as Osgood Junction, in the expectation of meeting Perlmutter—who, however, had meanwhile taken the Parapet Trail. Not finding Perlmutter, and worried over his whereabouts, Flint recrossed the summit for the third time and hurried down toward the hut in order to ascertain whether Perlmutter had arrived there via the other route before looking for him elsewhere. (We assume that Flint was hurrying because he did not stop to pick up and bring along Perlmutter's pack, which we are supposing that he left at the summit upon the earlier occasion, when relieving Snow of his.) The immediate cause of the misstep which resulted in his death may have been defective vision. Flint regularly wore glasses, but none were found upon his body or near at hand. He may well have removed them because of the mist and then been unable to avoid a stumble.

The question in the minds of all climbers will be, Why did not Perlmutter and Snow go out and look for Flint, if not that afternoon, then at least early the following morning which was clear, warm and sunny—a beautiful spring day? Joe Dodge, who took them to task severely on this score, remarks that even after 5 o'clock, when the boys had been at the huts for a couple of hours and had got to feeling very much better, they still had at least three hours of daylight. Because on June 1 the sun still strikes the range until almost 9 o'clock at night and even in the densest of clouds, at 5 o'clock in the afternoon and for three hours more they would have sufficient light to see those cairns starting out from the hut. On the other hand, Conservation Officer Doherty points out that to inexperienced persons, unfamiliar with the mountain, the featureless rocky cone of Madison, in heavy drifting fog, can be a very frightening place indeed, and one not devoid of danger.

As for Flint's own actions, and in particular his conduct of the party, of which he was the natural leader, we feel that facile judgments of criticism should of all things be avoided. Should the party have turned back? To be sure, the weather that Sunday was not the best for above-timberline climbing. Still, it may be mentioned that another party, of two people, with more years and more experience, who spent Saturday night in the Madison Huts, climbed to the summit of Madison Sunday morning in perfect safety, and continued down the Osgood Trail, when conditions must have been worse (heavy rain) than they became later in the day after the rain had stopped. This party reports that the going was slippery and difficult, but not impossible. Had the three boys been able to stay together there is no reason to believe they could not all have reached the hut in safety. The next day was ideal for high climbing and they would have been happy to be in a position to start directly for the summits.

Should they have insisted on staying together? This is an excellent basic rule for bad conditions, but there are special circumstances. Perlmutter was delayed because of trouble from blisters. When the two in the lead got above timberline and Snow's condition became apparent it no doubt seemed imperative to Flint to get him to the hut as quickly as possible, without waiting for Perlmutter—for whom he planned to return. If, in his final trip over the summit, he took in his haste chances that would not ordinarily be justified, his only fault seems to have been an over-eagerness to fulfil his obligations to his companions.

Tom Flint was a young man of very high character and great promise. His love of the mountains was genuine and deep. In his pocketbook there was found a copy of the following prayer, of unknown authorship:

SUMMER SPLENDOR

> Thy beauty, O God, is upon us, summer splendor everywhere. Days bright with vision, or dim with mist, haze or smothered sunshine; nights wistful with moonlit memories.
>
> Thou hast made our life a summer sowing, an autumn harvest, and a great white winter; too short for hate, and only long enough for the love that lifts the load we all must bear.
>
> Who does not hear a summer song singing low in his heart?

> Help us to make the life of our youth as lovely as the world in which it lives; the brotherliness of humanity equal to the beauty of nature.

In memory of their son Mr. and Mrs. Flint have established a Thomas Hooker Flint Memorial Scholarship, to be awarded annually to a student in either Harvard College or Harvard Medical School. The capital fund for this consists of $15,000, made up from Tom's life insurance, his savings, and gifts from numerous friends. The scholarship, amounting to $750 per year, has already been awarded to a deserving young man for the present academic year.

One further matter deserves remark in the present connection. In reply to a letter to the Mount Washington Test Detachment of the Army, expressing gratitude for the help given in the recovery of their son's body, Mr. and Mrs. Flint received from the commanding officer, Major Donald P. LaCroix, a letter which begins as follows:

> Thank you for your thoughtful letter. I can't tell you how much it is appreciated, as you are the first to acknowledge the participation of this unit in the many searches and recoveries over the years.
>
> At your request, listed below are the personnel who actively participated in the recovery of your son. . . .

Major LaCroix then gives the names of an officer (Lt. William Lerner) and eighteen men.

It is the second sentence of Major LaCroix's letter which seems to deserve wide publicity, although it was not written with anything of the kind in view. The help rendered by this detachment of the Army in a series of White Mountain accidents has been far-reaching and vital. (See especially the account in APPALACHIA for June, 1956, 94-8, of the avalanche accident in Tuckerman Ravine.) No doubt this help will continue to be forthcoming, whether any thanks are received for it or not. But it would seem as if some expression of appreciation for the essential work contributed by the Army—and by Forest Service and State officials—in these difficult rescue operations was the least that might be expected from relatives and friends.

The 1957 search and rescue season on the Presidential Range began with a phone call from Joe Dodge of Pinkham Notch about 2 p.m. on June 3.

I was advised that a Harvard student, Thomas H. Flint, age 21, of Simon Willard Road, Concord, Mass., had died near the summit of Mt. Madison. [See above.—ED.]

The next call for assistance came on the night of July 18 at 9 p.m. A phone call from the Glen House manager, Earl Stephenson, informed me that a hiker was in trouble on the Osgood Trail somewhere on the side of Mt. Madison in the Great Gulf area.

Calling Commanding Officer Major Donald LaCroix, of Camp Dodge, I asked for a detail of fifteen men. Ranger Goodrich was alerted and the rescue party assembled at the Glen House within the hour.

I learned that the hiker was one Abraham Covo, age 35, of 27 St. Joseph Drive, East Longmeadow, Mass. He and his wife had hiked to the Lakes-of-the-Clouds Hut three days before and spent the night. The next day they started over the range and in the vicinity of Edmands Col Mr. Covo's legs began to bother. That night was spent in the new Forest Service shelter at the Col. The next day they continued on the Gulfside Trail to the Madison Huts, where they spent the night.

The following day the couple left Madison and started down via the Madison Gulf Trail. Mr. Covo's legs began to bother once again and in the late afternoon he was in such pain that he could continue no farther. His wife ran down the trail to the Glen House for aid.

Covo was located near the West Branch of the Peabody. He was in much pain, both knees were badly swollen, and he was on the verge of shock.

Lashed to an Army stretcher, he was carried to the Glen House and put to bed and Dr. F. M. Appleton, of Gorham, was summoned.

On the afternoon of August 31, I received a message from Mrs. James Shea, owner of the Ravine House in Randolph, that one of her guests was overdue from a walk.

Arriving at the Ravine House, I learned that the guest was Rosabel Allin, age 88, of San Antonio, Texas.

This woman, who usually took a short walk, of a 2-hour duration, had not returned. The time then was 4 p.m. She had been gone since 10 a.m. The exact location, or the trail she was to have taken, was not known. Someone had heard her remark that she was going to visit a waterfall.

With almost nothing to go on, and with her age foremost in my mind, I set a large-scale search in motion.

Again calling my friend, Major LaCroix, of the U.S. Army Quartermaster Testing Detachment stationed at Camp Dodge in Pinkham Notch, I requested a large group of his men. Ranger Goodrich of the U.S. Forest Service was notified, and the aid of many summer residents of Randolph, as well as guests of the Ravine House, was enlisted.

The large group of volunteers was divided into small parties and we set out to walk every trail on the north side of Madison and Adams.

Miss Allin was located on the Air Line, making her way down the mountain. Her only ill effect was being a bit tired.

She had decided to hike to Madison Huts over the Knife Edge. About one mile from the Ravine House she met another hiker, a woman, who continued on with her. At about two miles they met a hiker coming down, a man, who advised her to turn around and return to the valley. This man, whose name I never learned, stayed with the two ladies until they were met by members of the search party who had been assigned to walk the Air Line.

This concludes the summer season on the Northern Peaks, with the exception of a call, on September 25, about an overdue hiker climbing Madison via the Daniel Webster Trail. He reached the highway at 10 p.m., just as a party was being organized.

PAUL T. DOHERTY,
Conservation Officer, Gorham, N. H.

On Mt. Washington. August, 1957. On the morning of August 6, 1957, I was guiding a group of Camp Asquam girls from the Lakes-of-the-Clouds Hut to the summit of Mt. Washington when just below the Westside junction one of them became ill. Because the child was suffering severe abdominal pains, I was reluctant to move her without a stretcher, so I sent the remainder of the group to the summit with one counsellor and asked the other to remain with the girl. We clothed the youngster as heavily as possible, since the temperature was only 34°, with forty miles of wind, and we were in dense fog continually. I ran to the Lakes as fast as possible and procured the Hutmaster, John Hopkins, with Chuck Kellogg, Greg Prentiss and Don Springer, who returned to the scene with a Stokes litter. The boys went on ahead of me while I warmed up a little, then I caught up with them on the slide not far below the summit. From the time the boys left the hut to the time they arrived with the litter on the summit only forty-five minutes elapsed. As usual, the hutmen did a fine job when called upon in an emergency. Luckily, the girl was suffering only from tonsilitis, as we discovered soon after she arrived at the hospital, and indigestion had caused the severe abdominal pains. However, in such inclement weather speed is always important, since the elements can soon sap the strength of one who becomes ill above treeline. In this particular case the youngster's body-temperature was several degrees below normal when we got her to the summit, even though she had been subjected to the poor weather for little over an hour. This is one time when a camp really got their money's worth for the guide's fee! The policy of hiring a guide for a group when no experienced people are available in camp is one that many camps neglect.

George Hamilton

Accidents in the Alps were extremely numerous this past summer. Although the accident on the Eigerwand, in which three men were lost and one rescued at the cost of a tremendous effort, received wide publicity, many others were more costly in human life and unfortunately many can be ascribed to insufficient experience and poor or inadequate equipment. The guides who are regularly called out to effect rescues are, as a consequence, asking that some steps be taken to limit climbing freedom for inexperienced climbers. Officials of Austria, France, Italy and Switzerland are trying to get together on regulations which will be mutually satisfactory, but are finding that it is very difficult to arrive at an international standard of proficiency. The real solution to this problem would appear to lie in better safety education rather than in rules and regulations which merely provide an incentive for circumvention.

Accidents in the western mountains apparently did not involve as many people as last year. Mrs. Ernestine B. Roberts, 88, who set out on August 5 to make her fifteenth ascent of Pikes Peak, disappeared. Her body was found high on the peak on August 14. A Boy Scout who was injured by a fall in the Wind River Range was evacuated by helicopter to Rock Springs, August 10, the helicopter taking off with the injured boy from an altitude of 10,600 feet. Two accidents on Mt. Rainier late in August were caused by falls into crevasses. George Sainsbury, who fell into a crevasse at 8000 feet on the Kautz Glacier, was quickly evacuated to the hospital with a broken leg. William Haupert, who fell into a crevasse higher up, was not so lucky and died as a result. The body was brought down with difficulty.

Kenneth A. Henderson

On Capitol Peak, Colorado. July, 1957. On July 25 John U. Heckert, a young A.M.C. member from Wilmington, Del., and a student at M.I.T., was killed while descending a couloir running down from the east ridge of Capitol Peak into Pierre Lakes Basin. Heckert was leading a party of three which included, besides himself, Eileen L. Ginter and Richard A. Slusser. Leaving Snowmass Lake at 4.40 a.m., in six hours the party attained the Capitol east ridge by a couloir one mile from the summit, and after some fairly difficult rock-climbing arrived at the summit at 1 p.m. For their return it was decided to descend by a different couloir, in order to eliminate some of the east ridge scrambling.

Slusser descended the new couloir for some distance and then advised the others, who roped up and followed. After joining him they unroped. Here Heckert separated himself from the others. He lost control and was last seen alive by Slusser, who saw him sliding headfirst down the couloir and unsuccessfully trying to arrest. The other two then roped up and proceeded by cutting steps to the foot of the couloir. Here the body was discovered, wedged in a crevasse. Heckert had died from a broken neck and a skull puncture in the vicinity of the left temple. His ice-axe was lodged in the snow about 100 feet above the body.

Pertinent facts are: first, that the couloir was extremely steep, perhaps in excess of 75 degrees in places; secondly, that it was convex, with the bottom invisible from the top; and finally, that it split near the bottom and a gendarme caused the main névé to be shunted to one side. All three members of the party were proficient rock-climbers, but it is questionable whether any one of them had had sufficient experience on snow and ice to lead a trip of this sort. Heckert's experience in this line had been limited to that acquired on the present outing. On July 22, with the other two, he had crossed the Hagerman-Snowmass ridge and descended Snowmass Peak by a series of glissades, none of which involved a slope of more than 40 degrees. He had never been on skis. In the judgment of someone who knew him well, he was inclined to be impetuous; and the opinion was voiced that his experience on Snowmass Peak would have been sufficient to make him over-confident.

J. Charles Fox

[This accident seems to call for no further comment. That proficiency in rock-climbing does not, of itself, qualify anyone to lead climbs on snow and ice is an old, old story, confirmed time and again in the Alps and elsewhere. That an unknown couloir, the bottom of which cannot be seen, should never be glissaded, is a fundamental rule. And, once a slide has begun, its arrest by the ice-axe requires a tricky method which must be learned and practiced beforehand.—Ed.]

On Mt. Howson, British Columbia. August, 1957. Mt. Howson (9067 ft.) is a bold rock peak in the Coast Range, about twenty-five miles southwest of Smithers on the Canadian National Railway, and roughly one hundred miles east of Prince Rupert. Like many of the Coast Range peaks it rises from a low base, and because of heavy snowfall it bears large glaciers. It had been seen by Hall from Sir Robert (Borden) and by Neal Carter from the Seven Sisters in 1939 and 1940.

Major Rex Gibson, president of the Alpine Club of Canada, with different companions had visited the area in 1954, 1955 and 1956. In August 1957, with Sterling Hendricks and Donald Hubbard of Washington and two other climbers, Alex Fabergé and Alvin Peterson, he had flown in to Burnie Lake, five miles from the mountain. Gibson, Hendricks and Hubbard, constituting a very strong and experienced party, were attempting the unclimbed peak, while Fabergé and Peterson remained in base camp at the lake. While climbing a steep ice couloir at about 6500 feet Gibson, leading the rope, was hit on the head by a small stone, with sufficient force to knock him over, and the three fell about 300 feet. Hubbard's knee was broken, Gibson was unconscious or delirious, and Hendricks, with a broken arm (or shoulder) and broken ribs, in thirty hours made his way down the difficult ice and rock and struggled back the five miles to base camp. Fabergé and Peterson immediately set out for the mountain, only to find on their arrival that Gibson had died an hour previously. Hubbard told them that several small snowslides had passed over him and Gibson during their two days on a ledge. With great difficulty they succeeded in getting to Hubbard, and in two days returned with him to the lake, whence a plane was called by radio and the injured men were flown out to the hospital at Terrace.

Our comment on the accident is that this very experienced party simply had hard luck while exposed to a calculated risk which all climbers will recognize must occasionally be faced—falling stones. Had it not been for the courage and skill of Hendricks it is possible that neither he nor Hubbard would have survived.

Henry S. Hall, Jr.

Death of Hermann Buhl. On June 27 the Austrian mountaineer Hermann Buhl, who became world-famous after his solo first ascent of Nanga Parbat in 1953, perished in the fall of a cornice on Chogolisa or Bride Peak (25,250 ft.), on the upper Baltoro Glacier. A member of the 1957 Austrian Karakoram Expedition, he had just been one of a party which succeeded in climbing Broad Peak (26,440 ft.). From a letter written by his widow to Fritz H. Wiessner, which has been placed at our disposal, we take the following detailed account of the accident.

"After the ascent of his second 8000er,[1] Broad Peak, my husband set out with his companion Kurt Diemberger, of Salzburg, to climb Chogolisa. According to Diemberger, Hermann was in top form on this day, upon which they hoped to reach the summit. Early in the morning, with fair weather, the two left their highest camp, at 6700 m. (22,100 ft.).

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[1] I.e., peak of 8000 meters or more. Nanga Parbat was the first.

The route lay, throughout, along a corniced ridge, only a few yards from the edge of the cornice. They could not go along the slope farther down, since the danger of avalanches or the breaking away of snow-slabs was too great there. At noon the weather suddenly changed into a bad snowstorm; mist came in so that one could no longer see anything. The two had reached a height of 7300 m. (24,000 ft.) when Hermann spoke for a return. They then descended at once. They were not roped together, since earlier, on the ascent, they had taken off the rope at a prolonged rest when they stopped to eat; furthermore, walking was easier in this way.

"On the descent they could scarcely see, because of the thick mist. Diemberger was walking about 10 m. (30 ft.) in front of Hermann. The descent had to be made as quickly as possible, since the tracks made on the ascent could now hardly be seen, owing to the heavy snowfall. At the height of about 7200 m. (23,700 ft.) Diemberger, while ahead, noticed that my husband was no longer to be seen behind him,[2] and went back up his own tracks for 10-15 m., till he came to a place where the two sets of tracks separated. The tracks of my husband led to the edge of the cornice and out into nothing, where he must have fallen down with a great section of it upon the steep and icy north wall."

Diemberger hurried down alone to inform the other members of the expedition at the base camp, where he arrived the following day. Next day a search party moved around and up the mountain to a point at 5700 m. (18,800 ft.) from which they could see into the great basin at the foot of the north wall. Careful search of this basin with a powerful telescope showed many traces of avalanches but no sign of the body, which was doubtless buried beneath the snow. Entrance into the basin was extremely dangerous because of the constant avalanches, and was not held to be justifiable without some sight of the object sought.

Hermann Buhl was one of the greatest climbers of all time, a veritable superman among mountaineers. His achievements even before first going to the Himalaya were stupendous. For instance, his diary of climbs in the Alps for the year 1947 alone records 68 trips, 134 summits attained, 35 extremely difficult walls climbed, some of them solo, with 11 first ascents. He had done the ferocious north wall of the Eiger and, in order to test himself (as he said) before the expedition to Nanga Parbat, he climbed the 6000-foot east wall of the Watzmann by the most difficult route, alone, in the night, and in the middle of winter.[3]

He was 33 years old at the time of his death, and leaves a wife and three small daughters.

ROBERT L. M. UNDERHILL

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[2] Elsewhere Diemberger has reported: "From time to time I looked back at Hermann, who was following me at an interval of about 10 m. Suddenly I felt a vibration of the snow surface and at the same time saw a small piece of the edge of the cornice break off; instantly I jumped with two or three springs to the right. . . . It did not occur to me in the least that the vibration which I had felt was the effect of a great break in the cornice behind me." He looked back simply as a matter of routine. (*Der Bergsteiger,* September 1957, 160.)

[3] These climbs are all described in his book, translated into English under the title, *Lonely Challenge* (New York 1956).

MONTALBANIANA

No Picnic on the Crawford Path.—We [two] undertook the ascent of Mount Washington, from Crawford's, before the mountain paths had been worked over and set in summer order, and without a guide. We carried only matches, food, tin cups, and a small portion of horrid New Hampshire brandy. An hour or two took us to the summit of Mount Crawford,[1] and there we rested and looked about. All around us was a sea of mountaintops, and among them Mount Washington stood grandly up in the northeast, dark blue, flecked with snow spots, distant, dim, and cold. After crossing the top of Mount Crawford, the path disappeared. Worn and washed away by spring torrents, it had not yet received its annual grading; and we were therefore left without other guide towards the secrets of the mountains than the distant view of the purple and white diadem of their gigantic king.

After consultation we determined upon taking a "bee line" for our destination, and on we went. Up the ridge of a young mountain who had climbed the shoulders of his big uncle Crawford to get a look at the world; down the other side through rocks, bushes, briers, and bogs into a narrow dell floored with an indefinite depth of unstable boggy material. We thumped across, and went on. Then we scratched our way through a hateful little forest of thick-set sumac bushes and alders, full of dead and fallen sticks lying across one another at all angles, and making a pretty intricate breastwork of the same general character with that raised by the French and Indians, in the year of grace 1758, in front of Abercrombie, as he was advancing to the attack of Ticonderoga. This also we passed; and having climbed a long and steep ascent, were brought to a stand; first, by reason of great expenditure of breath, and second, by a trifling chasm of a mile or so in length, eighty or a hundred rods wide, and some four hundred feet deep, whose sides approximated perpendicularity and fully attained angularity.[2] It seemed a base vacillation to go round, particularly as we did not know how far "round" might be, since our chasm turned a corner and went out of sight behind a mountain at each end, so that we were nearly at the tip of a vast promontory. Neither could we hope to jump across. For although a certain Swiss monk is said to have jumped nearly as far over an unbridged torrent, yet there was a lady in the case, which encouraged him. But we had for stimulus only the barren honor of climbing Mount Washington, who looked at us without changing countenance, and apparently without much interest. So reflecting, we resolved to climb unobtrusively down this side of the chasm and up the other; which we did with the loss of some part of our fingers and of the largest part of our patience, for the chasm seemed positively to have been put there to trap us in particular. Having now accomplished this further portion of our journey, we did not seem to have improved our prospects; for whereas, before, we had only a chasm in front, a short inspection convinced us that we were now supplied with that article all round, except where a ridgy and crooked isthmus connected our peninsula with a dozen or so of miscellaneous mountains, in a direction nearly opposite to that of our route.

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[1] A mistake for "Mt. Clinton"? If not, the route being followed would presumably be the Davis and not the Crawford Path (although the former does not go *over* Mt. Crawford). Both paths were in existence at the time. But the reference to the starting-point as "Crawford's" suggests Tom Crawford's inn near the present Crawford House, rather than the "Mount Crawford House" at Bemis (Notchland), which was run by N. P. Davis. In general, the mythical topography presented later on in the account would fit—or misfit—either path about equally well, but the fact that the party were evidently above timberline much of the time, with Mt. Washington visible ahead, seems to point unmistakably to the Crawford Path. Moreover, the Davis Path, because of its length, was comparatively little used, especially by walkers, and any party who *did* use it might be expected to claim credit explicitly for their undertaking.—Ed.

[2] This interesting feature (along with the bit of topography next afterwards mentioned) seems to have miraculously disappeared in the course of the past century.—Ed.

An inquiry now for the first time suggested itself, as to the intrinsic value of this ascent. Abstractly, the elevation of our corporeal frames over certain rocks known as Mount Washington did not seem so very distinguished an achievement. Our way to the summit was far from clear. We were on the apex of a hill, with an entire horizon of apices all around us, cut and split apart by an inextricable tangle of vast and precipitous ravines. Would it not do just as well to amuse ourselves by rolling rocks down the mountain? We thought it would, and with considerable exertion dislodged two or three huge ones of a ton's weight or more, and trundled them over. They leaped down with very little noise, falling from rock to rock with dead heavy *thuds,* and striking out sparks and smoke from every point they hit. Then we rested a little; resolved suddenly, being rested, that after all we *would* reach Mount Washington, and once more set our faces towards the calm brow of the distant Alpine king.

We struggled forward for two or three hours more, approaching slowly, but not safely, to the goal of our endeavors. We could see more plainly the great rifts and gullies leading up the scathed flanks of Mount Washington, and the large snowdrifts remaining about his crest. We sat down after a time, wearied and exhausted, upon a peak apparently about as high as the old monarch himself, not more than two or three miles away from him, to rest and to gaze. We had risen so high that here and there small clouds were scudding along the mountainside below us, and we even passed through one which swept by us —a cold transitory mist—on its windy chase up the hills; and the air, in spite of the clear bright sunshine, was cold and piercing. We sat, however, in the indifferent stupidity of extreme fatigue, an hour or two, until the sun was well down the western sky and behind a great bank of clouds which had been gathering in the horizon. Then we came to the definite conclusion that the best thing for us was to get back to the tavern again as soon as possible. So, chilled, stiff, hungry and tired, we rose and attempted to return; but fell forthwith into an ambush set against us by the Princes of the Powers of the Air, which quickly reduced the scope of our thoughts from distant enterprise to immediate safety. We had been delighting ourselves with watching the gathering of the clouds around the great central peak. Eddying and intervolving, vast fleecy hosts now deployed and manœuvred upon its inaccessible flanks. But this magnificent display operated as a "reconnaissance in force" to occupy the attention of us travellers in front, while the true and dangerous attack came upon us in flank. As we gazed in delight upon the thickening storm battalions around the brow of the mountain monarch, the air grew damp and cold around us. The slanting remains of sunlight faded into deep shadow. The light troops of a vast army of dense mists, sweeping low over our heads, came shutting off the last light, and, even as we looked in wonder, the wonder faded into fear as the main body of the cloudy host charged upon us. It was a cold, thick fog—the coldest and solidest I ever felt; apparently filled, indeed, with little particles of snow, which smote upon our thin summer clothing and chilled us through and through in an instant. Thicker and thicker it poured past, in interminable volumes, taking our remaining strength away with the warmth of our bodies, and our courage with our strength. We thought, in this perplexity, to follow the ridge on one of whose summits we were, downwards, and to grope our way out to the valley of the Saco by following the fall of the ravines. We could not see twenty feet. The darkness, as the sun fell, momently increased. Our little local recollections having been frightened away by the mist—thoroughly befogged in a double sense—we had quite forgotten which way the ridge sloped downwards. Having followed it some distance in one direction, and coming to an ascent, we concluded that we were going wrong, and went the other way. Undertaking this time to be persevering, we kept on until we got fairly away from the neighborhood of our resting-place, followed one or two cross-ridges which offered a fallacious prospect of leading us somewhither, and, just as night fell, were thoroughly lost, colder, wearier, hungrier and more scared than ever. We could not now see a step; and, moreover, had been for an hour stumbling and even falling from the weakness of excessive fatigue. But we dared not sit or lie down, lest the numbing sleep of the frost-cloud should take our lives away on its white cold wings. So we even betook ourselves to quadrupedal progressions. We crawled cautiously along, lowering each hand and knee with a separate care, to avoid cuts and scratches, and feeling out forward into the gloom, which seemed to press close upon our eyelids, so dense and palpable was it. We spoke to each other continually, lest we should become separated. Over and over again I put forth my hand for the next step and, upon quietly dropping it, found nothing under it. That was a sign that I was within six inches of some precipice. Then I called a halt, and cautiously advanced one foot over the brink. If I could reach a footing below, we crawled down; if not, we coasted along the edge, or tried another course. Over how many hundred feet of sheer descent [sic] I may have hung by the slippery hold of one hand and one knee—over what dark and empty depths, floored with edged and pitiless ledges of teeth, of sharp primeval stone, I put out helpless hand or foot into the ghastly gloom—I know not, nor do I care to know. But the helplessness of the unseen gesture yet burdens my memory. It has often haunted my rest. For years, if any slight disorder superinduced a dreaming condition, I was in dreams at intervals driven by cold mists or viewless winds through interminable chasms walled up to heaven, where I saw that seeking gesture repeated to infinity. Over every ledge would then be put forth a helpless hand, pointing to me, clutching at the thick mist, holding wide-spread fingers stretched stiffly out, sweeping slowly hither and thither, vibrating up and down in frantic indecision; indicating dreadful variations upon the solitary theme of utter and desperate loss and helplessness.

So we wandered, until it became evident, as, indeed, it would have been before, if we had reasoned deliberately, that we should shortly become absolutely unable even to crawl, and should then of necessity fall over a crag, or stiffen and die. We therefore felt about for a soft rock; and having found one which, if not actually soft, was at least rather smoother than most and, moreover, a little sheltered from the wind-driven frost-fog, we slept and watched alternately, in miserable five or ten minute snatches, until some time in the latter part of the night, spending the time allotted to watching in thrashing the arms about, kicking, stamping, and the other doleful manœuvres which are useful in fighting against severe cold and overpowering drowsiness. At last after an indefinite quantity—it might, so far as my perception of the passage of time was concerned, have been a week—of wretched dozing and waking, the last detachment of the dreadful fog scudded over us. The moon and stars shone out, most glorious and welcome to behold. We drained the remainder of our brandy, summoned the remainder of our strength, and resumed our last plan of getting out of the mountains by following the fall of the water-courses. We climbed, with many falls and much danger, all stiff and chilled as we were, hardly retaining any sensation beyond our elbows and knees, and articulating only with difficulty, down into a ravine, along whose lowest rift we stumbled, sometimes in shadow and sometimes in the uncertain gleam of moonlight, but free, at least, from the deadly cold and impenetrable darkness of the terrible frost-fog.

Our scheme was successful. After several hours' wandering we finally came out, at late breakfast time, upon a narrow meadow in the valley of the Saco [?], a little above Crawford's House. A day's rest sufficed us to repair damages. As for Mount Washington, people who want to ascend it, may. For my own part, I don't think it anything to boast of.

From an article, "Wood-Notes: The Mountain," by FREDERIC B. PERKINS, *in* Putnam's Monthly Magazine *for August, 1854. Somewhat abridged.*

ANSWERS TO WHITE MOUNTAIN QUIZ No. 6

1. a) Cutler, Ellis, Saco. b) Peabody, Androscoggin, Kennebec. c) Ammonoosuc, Connecticut.

2. Connecticut, Merrimack, Saco, Kennebec, St. Lawrence.

3. a) Merrimack, Saco. b) Saco, Kennebec. c) Connecticut, Saco. d) Connecticut, Kennebec. e) Connecticut, Merrimack. d) Saco, Kennebec.

4. A: 3, 5, 8, 9, 10. B: 1, 2, 4, 6, 7.

5. a) Crawford. b) The gap at which U.S. 3 crosses the Canadian line (Connecticut-St. Lawrence divide).

6. a) Three. Mt. Field (Connecticut, Merrimack, Saco). Mt. Washington (Connecticut, Saco, Kennebec). Salmon Mtn. (3364 ft.), on the

Canadian boundary 3 m. directly E. of the Third Connecticut Lake (Connecticut, Kennebec, St. Lawrence). b) No.

7. a) Tripyramid. b) Garfield. c) Guyot. d) Willey. e) Clinton. f) Sam Adams. g) Wildcat. h) North Baldface.

8. Moosilauke, Kinsman Notch, Kinsman, Cannon, Franconia Notch, Lafayette, Garfield, S. Twin, Guyot, Zealand, Zealand Notch, Field, Crawford Notch, Southern Presidentials, Washington, Pinkham Notch, Wildcat, Carter Notch, Carter Dome, Perkins Notch, N. Peak of Black Mtn., N. Baldface, Meader, W. and E. Royce, Evans Notch, Spruce Hill, Speckled Mtn.

9. Israel, Sandwich, Flat Mtn. (N.W. summit), Lost Pass, Sleepers, Tripyramid, Livermore Pass, Kancamagus, Huntington, Hancock Notch, Hancock, Carrigain, Carrigain Notch, Lowell, Anderson, Nancy, Bemis, Willey, Field, Crawford Notch, Southern Presidentials, Washington, Clay, Jefferson, Sam Adams, Bowman Sta., Crescent Range to Black Crescent, N. and then S.E. and E. to cross Grand Trunk ½ m. S. of Head Pond, Cates Hill, Milan Hill.

* * *

To the Honourble the Seneate & House of Representatives
humbly Sheweth

That Ever Since the first Setelment of this Town and Others adjacent in Upper Coos the Inhabitants and Travelers have been Great Suferers for want of a boat, Suitable to Carry People horses & Teams over Connecticute River and a branch thereof Called amminooSuck River which Runs in to Connecticute River in Northumberland and wheras Thomas Burnside Esq^r hath Proposed building a Suitable boat or boats if he Might have a Charter of a ferry in Such manner that the ferry to Cross Connecticut River might take in AmminnuSuck which your Petetioners Supose might be without Inconveniance with the Same boat Therefore Pray the Sole Priveledge of Keeping a boat or boats in Northumberland for the above Purposes may be Granted to the s^d Burnside he being Subject to Such Regulations & Restrictions as your Hon^rs in your wisdom Shall See meet and your Petetioners will Ever Pray

Northumberland May 14th 1785 [Twenty-seven signatures]

New Hampshire Town Papers, XIII, 90-91.

BOOK REVIEWS

The Everest-Lhotse Adventure. By Albert Eggler. English version translated from the German by Hugh Merrick. Printed in Great Britain. Harper & Brothers, 1957. 222 pages, 24 pages of photographs, color frontispiece. $4.50.

Mountaineers around the globe were thrilled in May 1956 by the news that the Swiss also had climbed Everest—not once but *twice,* and 27,890-foot Lhotse into the bargain. This great and deserved success, as is clear from Eggler's modest account, was based on sound planning, the finest oxygen equipment yet used, a top-notch climbing team which included Jürg Marmet the oxygen expert, and exceptional weather. This expedition had nothing hit-or-miss about it. The cost was about £30,000 (or $84,000). Thirty-four tents and ninety-seven sleeping-bags were taken, while oxygen equipment alone weighed about a ton. More remarkable, only one member of the party, Reiss, had ever been in the Himalaya before. Yet so careful were the preparations and so well chosen the team and its leader that the expedition was brilliantly successful.

The book is sound, too, but not brilliant. The first part moves steadily through the preparations and gradually works its way into the West Cwm. There the most graphic section of the book begins. The best chapter takes us with Reiss and Luchsinger as they struggle up the narrow couloir, "steeper than the Marinelli Couloir on Monte Rosa," that runs up 1700 feet to the ridge between the summit peaks of Lhotse. When they finally reach the "savagely sculptured summit, there was neither room to sit nor to put a rucksack down". Compared to this summit, the top of Everest seems commodious. The *two* ascents of Everest are well described, though not at first-hand. Eggler repeatedly pays tribute to Hunt's party. Significantly he states that "the uppermost 1500 feet of the South Ridge were definitely comparable with the finest ice and snow ridges of the Alps". Hillary's chimney near the summit he describes as "an almost vertical lift of the ridge forty to fifty feet high".

The book's photographs are good, although most of the expedition film was lost in a distressing accident on the return journey. *The Everest-Lhotse Adventure* is far more like Hunt's *Ascent of Everest* than Herzog's *Annapurna.* The Swiss book may not sell as many copies as either of the others, but it is a classic account of the best type of "large" expedition.

ROBERT H. BATES

Makalu. By Jean Franco. English version translated from the French by Denise N. Morin [Mrs. Charles Evans]. London: Jonathan Cape, 1957. 256 pages, 20 pages of photographs, color frontispiece and 7 maps. 25 shillings.

Makalu is as French as *The Everest-Lhotse Adventure* is Swiss. Franco does not emphasize the serious preparations and the equipment. Instead, he throws himself impressionistically into the story of the human side of the expedition. There are no heroics. We hear of a "world record shampoo" at 17,400 feet, of Lionel Terray's fondness for fish sauce, and of the medicinal alcohol left behind by the reconnaissance party and now turned into a raspberry liqueur. "The highest, hardest, most beautiful and most dangerous mountains had already been climbed!" says Franco on one occasion. "Record comfort was what we were interested in at the moment. . . ."

But we should not be deceived by Franco's light-hearted approach. Excellent equipment and planning are obvious. Incidentally, Hillary's route on the lowest part was used. Among the assets of the expedition, besides its fine climbing team, were an excellent group of Sherpas, Franco's personal knowledge of the route very high on Makalu, and splendid weather and snow conditions. Franco pays highest tribute to the Sherpas, especially to Da Noo, and also to Sirdar Gyalzen, who went to the summit. That nine men reached the crest of Makalu—"just like a pencil point"—shows how completely the defenses of Makalu were overcome. Climbers reached the top on *three successive days!*

Everyone will delight in Franco's memory of the thrill of hearing Terray and Couzy cheer when they reached the summit, and also his description of the next few hours as he sat in front of Camp VI in glorious weather, the incomparable view of Everest before him, and savored the thought of climbing the firm snowslopes to the summit the next day. *Makalu* is no expedition textbook, as *The Everest-Lhotse Adventure* is in many ways, but it has color and the flavor of Jean Franco, who declares, "Eschewing fanaticism, the temptation to break records which lose their significance by the morrow, and the dangerous seduction of heroics, I have always thought, like many others, that it is better to wait than to take a chance, to pause than to pant, to sing than to shout."

ROBERT H. BATES

The Mountain World, 1956/57. Edited for the Swiss Foundation for Alpine Research by Othmar Gurtner and Marcel Kurz; English version edited by Malcolm Barnes. Printed in Switzerland. New York: Harper & Bros., 1957. 200 pages, 38 pages of photographs (many of them double folds), maps and sketches. $6.00.

The appearance of a further volume of this annual is a welcome event, as well as a distinct contribution to mountaineering literature. As is customary in these issues, selected narratives of climbing and exploration carried out in mountain areas of the world are presented. Though articles on the Himalaya outnumber the rest in this volume (that has been the case for some years), the Alps, the Dolomites, Alaska and Africa are also represented.

American readers will be particularly interested in "Mount McKinley (Alaska); History and Evaluation", by Bradford Washburn. The treatment of this article exemplifies the finest qualities of the annual, with its wedding of an excellent map, magnificent double plates, and carefully annotated diagrams, with the text. Sheldon Brooks contributes an account of the ascent of University Peak, Alaska, to complete the American articles in this issue. The area of the Chogolungma Glacier, in Baltistan, explored so long ago by the Workmans, is the subject of three articles. One of these is on the difficult problem of nomenclature in that region. All three derive from the same expedition of 1955 about which Oskar Dorfmann wrote in APPALACHIA XXXI (June 1956), 1-11.

I.G.Y. shows its influence in this issue by the inclusion of an interesting article on "Glacier Ice: Alpine Glaciers and Greenland Research", by Othmar Gurtner. Here again there is lavish use of plates and text-diagrams to augment the text. And to emphasize the need for more scientific interest in mountain areas, Robert B. Forbes' "Field Research and Expeditionary Mountaineering" is reprinted from the *American Alpine Journal* of 1954. Accounts of ascents on the Ebnefluh, the Torre Venezia and the Aiguille du Plan, climbing accounts of Kangchenjunga, Makalu, Kamet, Lhotse and Everest (second ascent) complete the survey of mountaineering. There is also a characteristically detailed discussion of the virungas (volcanoes) in the Belgian Congo, by Arnold Heim.

From this brief survey of the contents, the reader will see that there is specific fare for almost everyone, as well as a presentation of significant mountaineering during the 1955-56 period. Years hence, and the reviewer hopes that *The Mountain World* will still be an annual event then, a complete run of this annual will have great historical value. That will be so not only because it will be a repository of detailed account of ascents, superbly illustrated, but also because, by its worldwide coverage, it will reflect the shifts of area interest and the changing tastes and emphases of mountaineering, as carried on by climbers from the western world.

BENTON L. HATCH

In Highest Nepal. Our Life among the Sherpas, by Norman Hardie. London: George Allen & Unwin, 1957. 191 pages, 14 pages of plates, with color frontispiece, 4 maps, diagrams. 21 shillings.

The Sherpas have made important contributions to all Himalayan climbing and, because of their part being presented in so favorable a light in the literature, widespread interest in these people has been aroused. Norman Hardie was moved to plan matters so that he could answer for himself some of the questions he had about their life, questions which arose from his own Himalayan climbing experience. The opportunity came when he was invited to join the 1955 Kangchenjunga expedition. He arranged to stay in Nepal after the party had departed, and to carry out survey work in the vicinity of Chamlang between the end of the monsoon and the advent of winter. In the several months interim, he planned to journey to Khumjung, the native village of some of the Sherpas who had accompanied the Kangchenjunga expedition, and live among them as closely as he was able. During part of this period he was joined by his wife and by Joe Macdonald.

This book is, as far as I am concerned, one of the best accounts of the Sherpa to appear. The journey from Kangchenjunga to Khumjung is one of no mean order; moreover, desiring to be as near the Tibetan border as he could get, he passed through country which no traveler had entered before. For a variety of reasons, Hardie decided to live off the country, with only a bare minimum of European foodstuffs, and much of that designed to cushion the diet of his wife and Macdonald. This enabled him to "live" with the Sherpas perhaps more completely than would have been possible otherwise. His observations are keen, his comments fresh, his appraisals mature, and the resulting account with its well selected photographs and interesting drawings is a very vivid picture of Sherpa life.

BENTON L. HATCH

Arctic Bibliography, prepared for and in cooperation with the Department of Defense, under the direction of the Arctic Institute of North America. Edited by Marie Tremaine. Vol. VII. Washington: Department of Defense, 1957. xiii, 1071 pages. $4.25.

This new volume adds some 5054 entries with coverage down through 1955 to those in the previous six volumes of the bibliography, and brings the total number included in it to 43,464. As in previous volumes, the scope still includes such earlier material as comes to the editor's attention. This policy will result in a truly comprehensive listing of the scientific publications pertaining to the arctic and subarctic regions of America and Eurasia. The same thorough indexing is present in this volume as in the previous ones. May this project continue, and at the same high standard, one is tempted to say, forever.

BENTON L. HATCH

Mischief in Patagonia. By H. W. Tilman. New York: Cambridge University Press, 1957. 185 pages, 23 photographs, 2 maps, appendix, index. $3.75.

Who but Tilman, with his life-long interest in the remote and high places of the globe and his "sea fever" caught "late in life", would have chosen the Patagonian ice-cap for climbing and a converted Bristol Channel pilot cutter, *Mischief,* as his transportation there and back. His book is of two worlds, the sea and the ice-cap. Through it are laced descriptions of the scenery and bits of the history of that remote tip of South America, known at first-hand by so few. "Our approach to the mountains of Patagonia by way of a sea voyage of some 10,000 miles, for the sake of traversing 50 miles of glacier, may seem a little long. So long that some readers may think there is an intolerable deal of sea, as it were, to but one halfpennyworth of mountain."

The Patagonian ice-cap lies on the southernmost coast of Chile, "where the high Andes begin to dwindle", and from it glaciers reach "down to the sea, where a mountaineer can step from his boat and begin his climb at sea-level". Across it he can come down to the Argentine lakes. Some attempts had been made from the Argentine side to reach the summit of the ice-cap or to cross it, but the Pacific side, "where the weather is worse and where there is nothing but rock, ice, and tangled rain-forest . . . had scarcely been touched". Tilman and his two climbing companions, Charles H. Marriott, a member of the Alpine Club, and Jorge Quinteros, a young Chilean climber, both of whom met the *Mischief* at Punta Arenas, succeeded in crossing the ice-cap at the Calvo Pass and reached Lake Argentino—and then recrossed it back to the Pacific and their boat. The two crossings took six hard weeks, including Christmas day. Every bit of food and fuel had to be carried by the three. Blizzard after blizzard kept them in their tents. "The extremely violent changes of weather baffled prediction." Tortuous glaciers "in tumultuous waves" made difficult climbing. The route had to be chosen on the spot, with no help from previous reconnaissance. And Charles' foot troubled him.

The crew of three, left behind with the boat, met them with the news that the propeller had broken. There was nothing for it but to inch their way up the rocky Pacific shoreline under canvas. "A year and a day after leaving [England] we passed Falmouth . . . at last on 9 July [1956] we entered Lymington River and tied up at the yard where we had fitted out."

"There is something in common between the arts of sailing and of climbing. Each is intimately concerned with elemental things, which from time to time demand of men who practise those arts whatever self-reliance, prudence, and endurance they may have."

Anna E. Holman

Introduction to Mountaineering. By George Alan Smith. New York: A. S. Barnes and Company, 1957. 128 pages, 54 photographs. $3.75. (Price to A.M.C. members, $2.81.)

As its name indicates, this book, by an active climber in the New York Chapter, is directed toward helping novices over the gap that lies between trail-walking and mountaineering. For such, it not only contains much good technical advice but also gives something of a philosophy of climbing and some enticing peeks at the satisfactions climbing can bring. The expositions of climbing technique are by no means as comprehensive as in Henderson's *Handbook of American Mountaineering* or Young's *Mountain Craft,* but should get the novice safely started.

The basic framework of mountaineering is gradually built up with a "legend", a parable and a touch of history. The chapter on pre-climbing conditioning gives good emphasis to an oft-neglected subject. The section on equipment is simple and specific. The sections on rock and snow climbing are copiously illustrated with photographs which, in many ways, give a novice a better idea of techniques applied to actual situations, like a layback, than do the more common line-drawings. Sequences such as the tying of a bowline are particularly good. In any book which gives only the highlights of basic technique it is easy to criticize omissions. This reviewer felt that too little attention was given to the rotten-rock problems which infest many of our mountain chains. Likewise, there is almost no mention of the problems of approach which form a considerable part of mountaineering in wilderness areas.

A central theme evident throughout the book is the emphasis on caution, safety and good judgment. An entire chapter is devoted to the "shadowy line" between the justifiable, calculated risk and the unjustifiable gamble. Certainly, in view of the many accidents involving brash beginners, this point of view is well taken and, if for no other reason, makes this a valuable text for the use of beginners.

Besides the basic technical chapters there are sections on the duties of the belayer (the "V.I.P.") and the leader, and on mountain photography, as well as a bibliography and a list of climbing clubs (American) and guidebooks. Although, occasionally, the side-comments which enliven the text tend to obscure the main issue, Mr. Smith's book covers in a short space a wide range of technical advice and yet remains unusually readable.

Percy T. Olton

Beyond the Cabin Door. By Walter Collins O'Kane. Rindge, New Hampshire: Richard R. Smith, 1957. 239 pages. Drawings by Francis Lee Jaques. $3.50.

Dr. O'Kane is known to many members both for his pleasant guides to the eastern mountains and for his scientific work on pesticides. This is the second book of reflections from his cabin in Wonalancet (see Appalachia XXX, 626-7), and much like the first. The fruit of many years of watching the little local creatures and plants, these notes, arranged almost at random, are imaginatively adorned and lovingly polished for happy recognition by outdoors people. Pick it up anywhere and read a bit for relaxation.

The chapter on trails is the one most consistently on a single subject, and celebrates properly the pleasures of making camp, of fire-building, and of traveling light. ("In due time you find yourself removing the seeds from prunes to save that much weight.") But on almost any page there are original figures of speech, such as: "Like persons on the way to the theatre, leaves come floating down the brook, . . . turn in at a little eddy . . . and presently take their places along the bank, in accordance with the letter and number on their ticket of admission."

Ruth Gillette Hardy

Wings of the Forest. By Dr. William J. Long. New York: Doubleday & Co., 1957. 239 pages. Drawings by Ray Houlihan. $4.00.

This delightful book consists of eighteen chapters, each of which has as its principal subject a well-known bird of the North American continent seen against a background of his environmental neighbors. It is based on Dr. Long's lifetime of intimate observations and experiences. Through his eyes old and young alike can enrich their own knowledge and appreciation of our natural world.

C. F. Belcher

Route-Mapping and Position-Locating in Unexplored Regions. By Wilhelm Filchner, E. Przybyllok, T. Hagen. New York: Academic Press, Inc., 1957. 288 pages. $9.00.

Dr. Wilhelm Filchner, one of the greatest German explorers, died on May 7, 1957, in Zurich, in his 79th year. His books *Storm over Asia* and *My Tibet Expedition* are great reading. Some of us can still recall the time when the world awaited news from him, when he was missing for two and a half years in Central Asia and was finally rescued by two Englishmen. The Ronne party at present in Antarctica has its base on the shores of the Filchner Sea, explored by our author in 1912.

The present book has three parts: 1) method of route-mapping, by Filchner, 166 pages; 2) position-finding and altitude measurements, by Przybyllok (that name's not so bad! first you give a splurting sound and the rest of it is easy), 76 pages; and 3) route-mapping and topographical surveys with the aid of photographs, by T. Hagen, 30 pages. Professor Przybyllok died in 1954, but Toni Hagen is an active professor in Zurich and has worked with the U.N. in Nepal.

The first part of the book was written when Filchner was interned in India during the war. It represents the experience of a lifetime. It describes in minutest detail the organization of a caravan, the choice of equipment and wear, the layout of a camp, etc. Most of the book is on route-mapping. His method of compass-triangulation combined with field sketching should be studied by every explorer. He has a chapter on swamps and deserts, based on his perilous crossing of the Tsaidam Basin. For us, the part on mountain mapping is most important. He explains the use of a clinometer, theodolite, aneroid, and boiling-point thermometer to obtain altitudes. Some practical hints are given for location-finding, short-wave radio, and the use of meteorological instruments, with characteristic German thoroughness and attention to detail. One is advised, for instance, in which pocket to carry an eraser.

The second part of the book is a text on field astronomy. It gives a general introduction to latitudes and longitudes and time. It explains the solution of the celestial triangle, the position of stars, and how to handle a theodolite. From the various methods for position-finding our author chose the method of "position lines", because this gives results even when one can observe only some unidentified stars through breaks in the clouds. He presents several fill-in blanks: 1) for altitude determination, 2) for latitude and time from the sun, 3) for latitude and time from stars, 4) for the azimuth of the sun. This part is necessarily somewhat textbookish, full of mathematical formulas, and it will be appreciated mostly by experts.

Perhaps the most interesting part is the third. The caravans and mapping methods of Filchner's time are now partly replaced by parachuting supplies and by airplane photography. Hagen gives the fundamentals of photogrammetry both from the air and from the ground. He gives some examples of photo-geologic surveying in Nepal from his own experience. Some air photos (which you have to view upside down to see positively) and a sample map finish the volume.

Not too many of our members will read this book, but for those bent on exploring unknown regions it will be of the greatest value.

Erwin Raisz

BRIEFLY NOTED

The Ascent of Rum Doodle. By W. E. Bowman. New York: Vanguard Press, 1957. 141 pages, 16 illustrations. $2.95. A take-off on the big Himalayan expeditions, especially Everest. While inevitably some of the humor misfires, the percentage which comes off successfully (including the drawings) is very high. Decidedly entertaining.

Far, Far the Mountain Peak. By John Masters. New York: Viking Press, 1957. 471 pages. $5.00. The leading character of this novel takes up mountaineering, not for its own sake, but as a field of exercise for his will to power, and eventually renounces it on the same basis. In consequence the feelings and attitudes portrayed will scarcely strike climbers as authentic. The author is far more interested in the human drama, personal and social, of mountaineering than in the struggle with the mountain; the climbing episodes in themselves are not of much interest, but they do have the rare virtue of not being overplayed.

Snowdon Biography. By Geoffrey Winthrop Young, Geoffrey Sutton, and Wilfrid Noyce. London: J. M. Dent & Sons, 1957. 194 pages, 16 pages of photographs, end-paper map. 25 shillings. Two chapters, by Young and Sutton, recount the history of rock-climbing in Snowdonia. In the second of these Sutton, describing the most recent period, makes some interesting general remarks, such as that pitons are no longer considered taboo and that balance climbing is being superseded by out-of-balance climbing, on overhangs. The last chapter, by Noyce, surveys in very interesting fashion the appearances of Snowdon in literature.

Guide to Adirondack Trails. High Peak Region and Northville-Placid Trail. Published by the Adirondack Mountain Club, Gabriels, Franklin Co., N. Y. Sixth Edition, 1957. 234 pages, map. $3.25. (Available from the A.M.C.) The last edition was in 1950. This new one has been completely rewritten and exact wheel-measurements added for many hundreds of miles of trail. Loose-leaf format, with sections separately paged, so that they can be removed for use. The trail descriptions are very detailed, with plentiful notation of distances as in the AT guidebooks. A very careful and praiseworthy job. Our only criticism is that trail times have not been given—for reasons which we think inadequate.

Connecticut Walk Book. Published by the Connecticut Forest and Park Association, 322 North Main St., Wallingford, Conn. Reprint of the 1953 edition, with 1957 Supplement. Book and Supplement, $2.58; Supplement alone, $.52. Due to continual changes in the trails a completely new edition was not considered advisable at this time; the Supplement, listing page-by-page corrections to the older text, suffices to bring this up to date.

The following book, reviewed in the last (June 1957) issue of APPALACHIA from the English edition, has now been published in the United States: **On Climbing.** By Charles Evans. New York: A. S. Barnes & Co. $5.00. (Price to A.M.C. members, $3.75.)

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INDEX

Names of authors of articles are in small capitals, with titles of articles in quotation marks. Names of authors of books reviewed are in ordinary type, with titles of books in italics.

ABBOTT, Mary Ogden: "Through the Grand Canyon", sketches, bet. 40 and 41; "Improbable Interlude", 357ff.; sketches, 27, 97, 155, 157, 174ff., 189, 336, 339ff., 358ff.
Abominable Snowman, The (Izzard), reviewed, 115.
Accidents: on Mt. Washington, 94ff., 327, 406f., 556f.; on Mt. Clay, 264f.; on Mt. Madison, 559ff.; on Mt. Lafayette (airplane), 405f.; on the Westfield River (canoeing), 257f.; on Maroon Bells (Colo.), 260, 265f.; on Pikes Peak, 568; on Capitol Peak (Colo.), 569; on Mt. Hood, 246; on Mt. Rainier, 568f.; on Mt. Howson (B. C.), 570; on Ben Nevis (Scotland), 407; in the Alps, 242, 280, 408ff., 568; in the Himalaya, 570f.; prevention of accidents, 229ff.
Aconcagua: South Face (Ferlet and Poulet), reviewed, 288.
ADAMS, Abigail, note on Northern Cascades primitive area, 419ff.
ADAMS, Harry B., "Charles C. Torrey and Spur Cabin", 29ff.
Adams, Herbert E., promoted, 426.
Adams, Mt.: Spur Cabin, 29ff.; Log Cabin, 101; trails on, 31ff.; walking trip on, 372ff.
Adams, Sherman, on A.M.C. trail crew, 540ff.
Adirondacks: height measurements in, 551; trail guide, reviewed, 584.
Airlifts for skiers in Alps, 528f.
Airplane crash on Mt. Lafayette, 405f.
Alaska, climbs in, 387, 491ff., 508ff., 523. See also Mt. McKinley.
ALLEN, D. G., book reviews, 121f., 437.
Alpinistes Célèbres (ed. Ségogne and Couzy), reviewed, 120.
Alps: climbs and walks in, 225ff., 377ff., 527f.; walking routes in, 393; skiing, 528f.; accidents, 242, 280, 408ff., 568; books on, reviewed, 114f., 120, 121, 126, 288ff., 432f., 436f., 578f. See also Mont Blanc.
Alps and Elephants (De Beer), reviewed, 432.
American Association of Swiss Alpine Club Members, 279.
Among the Clouds, reprint from, 111ff.
Andes: climbs in, 82, 241f., 388f., 522; books on, reviewed, 114, 288f., 431f., 580f.
Anstey, Mt. (Selkirks), 222.
Antarctica, 83, 242, 389f., 523.
Appalachian Mountain Club: huts and camps, 21ff., 99f., 342f., 400, 411; trails and trail work, 41ff., 100f., 268ff., 278, 353ff., 412; early trail crew, 540ff.; shelters, 537f.; reservations, 210ff.; canoeing, 258, 261ff., 532f.; skiing, 90ff., 400ff.; ski patrol, 92, 400; excursions, 93ff., 259ff., 523f., 533ff.; 4000-footer Club, 526; honorary and other members, 78ff., 280, 381ff.; Evelyn Murphy Fellowship, 109; annual reports for 1955, 127ff.; chapters, see name of chapter.
Appalachian Trail, 87f., 252, 278f., 412f.
Arctic: mapping, 241; glaciological research, 522f.; books on, reviewed, 124, 291, 294, 580.
Arctic Bibliography, Vol. VI, reviewed, 294; *Vol. VII,* reviewed, 580.
Arctic Research (ed. Rowley), reviewed, 124.
Arctic Wilderness (Marshall), reviewed, 291.
Army Quartermaster Camp, Pinkham Notch, 96ff., 564, 566.
Artificial aids in climbing, 441ff.
Ascent of Rum Doodle, The (Bowman), reviewed, 582.
Audubon Western Bird Guide (Pough), reviewed, 439.
August Camp 1956, 259ff.
AVERY, Abigail D.: "Two in the Tetons", 56ff.; book reviews, 288f., 438f.
Azéma, M. A., *The Conquest of FitzRoy,* reviewed, 431f.
Aziscoos, Mt., in 1861, 467ff.
Baal, Mt. (Selkirks), 223.
Baker, Mt., first ascent of West Peak of Black Buttes, 240.
Ball Mountain flood control dam (West River, Vt.), 545.
Band, George, *Road to Rakaposhi,* reviewed, 117f.
Banks, Mike, *Commando Climber,* reviewed, 122.
Baptiste Lake and peak (Wind River Range), 38.
Basin, The (Franconia Notch), 203f.
BATES, Robert H., book reviews, 577f.
Bauer, Paul, *Kangchenjunga Challenge,* reviewed, 285: *Siege of Nanga Parbat,* reviewed, 285.
Bavarian Expedition to Nepal 1955, 84.
Bay Circuit (Mass.), 276f.
Bears in White Mountains, 35, 111ff., 479ff.
Bear River (i.e. Grafton) Notch, 460f.
BECKY, Fred, note on climbs on Mts. Rainier and Baker, 240.
Belaying on snow and ice, 12ff.
BELCHER, C. F.: "Trolley on the Presidentials", 320ff.; notes on roads to Katahdin, 272, birds on Beacon Hill, 273f., Hamilton K. Pyles, 280; book review, 582.
Ben Nevis (Scotland), accident on, 407.
Bent, Arthur E. (ed.), *Winter on Mount Washington,* reviewed, 293.
Berkshire Chapter, A.M.C., 278.
Bethel (Me.), in 1861, 459.
Beyond the Cabin Door (O'Kane), reviewed, 582.
Big Bend National Park (Texas), 109f.
Big Blackfriar Mountain (Selkirks), 224.
Big Sault (St. Lawrence River), canoeing, 301ff.
Billings, Marland P., *The Geology of New Hampshire, Part II,* reviewed, 435f.
Birds on Beacon Hill, 273f.
Black Mountain (Jackson, N. H.): A.M.C. reservation, 211f.; trails, 525.
Black Rock Camp (New York Chapter), 99f.
BLOOD, Charles W.: "Ideas behind the A.M.C. Trail System", 41ff.; "The Club Reservations", 210ff.; "Trail Erosion", 353ff.
Book of the Mountains (ed. Spectorsky), reviewed, 121.
Books about New Hampshire, reviewed, 293f.
Bourdillon, Jennifer, *Visit to the Sherpas,* reviewed, 433f.
Bourdillon, Tom, death of, 280.
Bowman, W. E., *The Ascent of Rum Doodle,* reviewed, 584.
BRADFORD, Barbara, sketches by, 11, 23, 40.
British-American Karakoram Expedition 1956, 245f.
Brooks Range (Alaska), climbs in, 508ff.
Browne, Belmore, *The Conquest of Mount McKinley,* reviewed, 119.
Bruce's Eddy Dam (Clearwater River), 544.
Brungot, Sam, anecdote, 35.
Buch vom Kantsch, Das (G. O. Dyhrenfurth), reviewed, 116f.
Buhl, Hermann: *Nanga Parbat Pilgrimage,* reviewed, 285; *Lonely Challenge,* reviewed, 431; death of, 570f.
Bulge and Horn (Kilkenny), 523f.
Burnett, Whit, ed., *The Spirit of Adventure,* reviewed, 290.
Butcher, Devereux, *Seeing America's Wildlife,* reviewed, 123f.
Byrd, Richard E., obituary, 386.
Byroads of New England (Marlow), reviewed, 440.

CABOT, Thomas D., book review, 433.
Canoeable Waterways of New York State (Grinnell), reviewed, 292.
Canoeing: Concord and Merrimack Rivers, 24ff.; Gatineau River, 50ff.; St. John River, 254ff.; Green River, 261ff.; St. Lawrence River, 301ff.; Current River (Mo.), 403f.; Rapid River (Me.),

530ff.; upper Hudson River, 532f.; Slalom Championships, 258; accident, 257f.; books on, reviewed, 125, 292.
Carden, Marie, note on trail clearing, 538.
Cardigan Ski Reservation, 90ff., 214, 400ff.
Carlisle Pines Reservation, 211, 214.
Carnes Peak and Towers (Selkirks), 221.
Carpenter, Donald L., "Rohtang Pass", 47ff.
Carrigain, Philip, map of N. H., 512f.
Carter, Adams: "Ojos del Salado Expedition", 388f.; " 'Safety' Regulations in Grand Teton National Park", 546f.; book review, 116f.
Carter, Lewis A., "New State Park Plans in Mass.", 423f.
Capitol Peak (Colo.), accident on, 569.
Cascade Mountains, conservation in, 419ff.
Caswall, Muriel, book review, 119.
Cathedral Spires (Yosemite), 444f.
Cave exploration, 404f.
Champlain, Samuel de, map of Penobscot Bay, 498f.
China, climbs in mountains of, 164ff.
Cho Oyu (Tichy), reviewed, 430f.
Choate, Malcolm C., "Some Recent Trends in Excursions", 93f.
Chocorua, Mt., deed of (verse), 44ff.
Chocorua Mountain Club, trails, 278, 413.
Chugach Mountains (Alaska), climbs in, 491ff.
Church Path (Randolph, N. H.), 30.
Clay, Mt., accident on, 264f.
Clay Reservations, 211f., 214.
Clark, Ronald W., *A Picture History of Mountaineering,* reviewed, 433.
Clark, Sidney C., "Volunteer Trail Maintenance in the White Mountains", 268ff.
Classification of climbs, 221, 442.
Climber's Guide to the Teton Range (Ortenburger), reviewed, 295.
Coast Range (B. C.), climb in, 387.
Coffin, Stewart T.: "Accident on the Westfield River", 257f.; "Rapid River, Maine", 530ff.
Cog Railway (Mt. Washington), accident on, 543.
Collin, Nancy W.: "Skis to Zealand", 21ff.; book reviews, 119, 293.
Colorado Mountains, Guide to the (ed. Ormes), reviewed, 125.
Commando Climber (Banks), reviewed, 122.
Concord River, canoeing, 24ff.
Connecticut: conservation in, 105f.; trail conditions 1956, 412; bushwhack trip, 398ff.
Connecticut Chapter, 106f., 258, 268ff., 532f., 538.
Connecticut River, early ferry, 576.
Connecticut trails system, 539.
Connecticut Walk Book and *Supplement 1957,* reviewed, 584.
Conquest of FitzRoy (Azéma), reviewed, 431f.
Conquest of Mount McKinley (Browne), reviewed, 119.
Conservation, see Contents–Notes.
Cook, Dr., on Mt. McKinley, 387.
Cordillera Blanca, climbs in, 82, 241, 522.
Cordillera Huayhuash, climbs in, 522.
Cordillera Vilcabamba, climbs in, 241, 522.
Cordillera Vilcanota, climbs in, 82, 241, 522.
Cornell, Julien, "The American Association of Swiss Alpine Club Members", 279.
Cornice Mountain (Selkirks), 224.
Crane, Bessie Louise, obituary, 383.
Crawford Path in 1854, 572ff.
Crompton, John, *The Living Sea,* reviewed, 440.
Cropper, William H., "Climbs in the Southern Wind Rivers", 36ff.
Crosby, Irving B., obituary of Lawrence Martin, 78.
Cross, Leroy D., "A Night Out on Mount Adams", 372ff.
Current River (Mo.), canoeing, 403f.
Cushing, Edward, "My Guide and I", 377ff.

Daly, Reginald A., geologist, 549.
Darling, F. Fraser, *Pelican in the Wilderness,* reviewed, 438.
Dartmouth College Skiway, 252f.
Davis Path, history, 417.
Davis, Philip A., Jr., notes on skiing, 90f., 252ff., 400ff., 528.
Davis Reservation, 211f., 214.
Dayton, William L., "Floating the Current River in Missouri", 403f.
De Beer, Gavin, *Alps and Elephants,* reviewed, 432.
De Berard, Hazel, "Memories of Randolph, N. H.", 190ff.
De Booy, T., and C. G. Eggeler, *The Untrodden Andes,* reviewed, 288f.
Desio, Ardito, *Victory over K2,* reviewed, 286f.
Devil's Tower (Wyo.), ascents, 239.
Dhaulagiri, expeditions to, 83f.
Diamond Peaks, 467, illustration, 469.
Diamond River in 1861, 465f.
Dickinson, Thorn, on death of T. H. Flint, 562.
Dinosaur National Monument, 261ff., 275.
Dodge, Homer L., "Running the Big Sault in an Open Canoe", 301ff.
Dodge, Joseph B.: "Avalanche Fatality in Tuckerman Ravine", 94ff.; "Climbing Safely in the White Mountains", 229ff.; on death of T. H. Flint, 563f.
Doherty, Paul T.: "The Accident on Mount Clay", 264f.; on death of T. H. Flint, 563; on accidents in the Presidential Range in 1957, 566f.
Dolly Copp Campground, 411.
Dorfmann, Oskar: "Sidelights on the Frankfurt Himalaya Expedition of 1955", 1ff.; "Leaves from a Climber's Sketchbook", 216ff.
Dru, Aiguille du, book on, reviewed, 290.
Dyhrenfurth, G. O., *Das Buch vom Kantsch,* reviewed, 116f.

East of Everest (Hillary and Lowe), reviewed, 286.
East of Katmandu (Weir), reviewed, 118.
Eaton, William M., "Black Rock Camp", 99f.
Edison, Mt. (Alaska), 494.
Edmands Col, shelter at, 271.
Edmands, J. Rayner, 190ff., 341.
Eggler, Albert, *The Everest-Lhotse Adventure,* reviewed, 577.
Eiger, climb of, 299f.
Einstein, Mt. (Alaska), 492f.
Eisenhower, President, at College Grant, 35.
Ellis, Ridsdale, obituary, 78f.
Elusive, Mt. (Alaska), 493.
Emerson, Ralph Waldo, 313ff.
Eric, Mt. (Selkirks), 222.
Ethan Pond Shelter, 537f.
Evans, Charles: *Kangchenjunga, the Untrodden Peak,* reviewed, 430; *On Climbing,* reviewed, 437.
Everest (Morin), reviewed, 285f.
Everest Climbed (Serrallier), reviewed, 126.
Everest-Lhotse Adventure, The (Eggler), reviewed, 577.
Everest, Mt.: Swiss ascents of, 244; books on, reviewed, 126, 285f., 577.
Excursions, A.M.C. See Contents–Notes.
Expansion bolt, self-drilling, 86f.
Expedition Tumuc-Humac (Mazière), reviewed, 119f.

Fabyan, Horace, 281.
Falk, Sigo, on death of T. H. Flint, 562f.
Fang Rock (Selkirks), first ascent, 223.
Far, Far the Mountain Peak (Masters), reviewed, 584.
Farrar Reservation, 212, 214.
Fauna of New England, old account, 426ff.
Fay, Prof. C. E., on the Kearsarge controversy, 511ff.
Fay Reservation, 212, 214.
Ferlet, René, and Guy Poulet, *Aconcagua: South Face,* reviewed, 288.

Filchner, Wilhelm, and others, *Route-Mapping and Position-Locating in Unexplored Regions,* reviewed, 582f.
Fisher in the White Mountains, 485ff.
Fish's Tail (Machapuchare), first ascent, 453ff.
Fletcher, D. W., *Himalayan Tea Garden,* reviewed, 438f.
Flieger Erobern die Berge (Supf), reviewed, 436f.
Flint, Thomas H., death of, 559ff.
Flume, The, 203.
FOBES, Charles B., "Schoodic Mountain, Maine", 498ff.
Forest-fire fighting in Rhode Island, 545.
Forest Service, U. S., 264, 271, 280, 411, 426, 472ff., 543f.
Fosburgh, Hugh, *The Sound of White Water,* reviewed, 125.
Four-Thousand-Footer Club of New Hampshire, 526.
Fox, G. V., on the Kearsarge controversy, 512ff.
Fox, J. Charles, note on accident on Capitol Peak (Colo.), 569.
Franco, Jean, *Makalu,* reviewed, 577f.
Franco-Swiss Nepal Expedition 1955, 84.
Frankfurt Himalayan Expedition 1955, 1ff.
Frémont, John Charles, *Narratives of Exploration and Adventure,* reviewed, 434f.

Galdhöppigen (Norway), 251f.
Gale River slide and flood of 1954, 413f.
Garrison, William Lloyd, on Mt. Washington, 282.
Gasi La (Himalaya), 334.
Gatewood, Mrs. Emma, 87f.
Gatineau River (P. Q.), canoeing, 50ff.
Geology of New Hampshire, Part II (Billings), reviewed, 435f.
German-Swiss Himalayan Expedition 1955, 83.
Gibson, Rex, death of, 570.
Gilbert Lewis, Mt. (Alaska), 495.
Give Me the Hills (Underhill), reviewed, 289.
Glacier National Park, walking and camping conditions in, 547ff.
GLENNON, Thomas J., "A Day on the Middle Fork", 481ff.
Gilson Hill Reservation, 211, 214.
GOETZE, Klaus: "Camp Crawford", 102f.; Mont Jacques Cartier, 249ff.; anecdotes about J. R. Edmands, 341, Louis F. Cutter, 343.
Goodrich, Richard S., appointed District Ranger, 426.
Gosainkund, the Holy Lake (Himalaya), 329ff.
GOULD, Roderick, "More on the 4000-Footers", 247f.
GOWER, Ronald L., "The Bay Circuit", 276f.
Grafton Notch, 460f.
Graham, Mt. (Selkirks), 222.
Granatspitze (Eastern Alps), 378f.
Grand Canyon, sketches of, between 40 and 41; pack-train trip, 362ff.
Grand Teton National Park, regulations in, 546f.
GRAUSTEIN, Jeannette E., "Thoreau's Packer on Mt. Washington and Some Bits of Jackson History", 414ff.
Great Basin National Park, proposed, 544f.
Greeley, William B., obituary, 382.
Green Mountains: trails in, 412; books on, reviewed, 125f., 292, 293.
Green Mountains of Vermont, The (Lee), reviewed, 292.
Green River (Colo. and Utah), canoeing, 261ff.
"Green-enoughs, The" (Randolph, N. H.), 197f.
Greenland, Oxford Expedition to, 390ff.
GRINNELL, Lawrence I.: "Dinosaur Monument Canyon Trip", 261ff.; book review, 439.
Grinnell, Lawrence I., *Canoeable Waterways of New York State,* reviewed, 292.
GRISCOM, Andrew, "First-Aid Cache in Huntington Ravine", 98; book review, 122.
Guide Book to the Long Trail, 15th Edition, reviewed, 125f.
Guide to Adirondack Trails, High Peak Region, reviewed, 584.
Guide to the Colorado Mountains (ed. Ormes), reviewed, 125.

Hadley, Benjamin L., obituary, 79f.
HALL, Bill, "Inter-Club Ski Racing", 90.
HALL, Henry S., Jr.: obituary of Albert H. MacCarthy, 381f.; note on death of Rex Gibson, 570.
HALL, Thelma B., note on Petrified Forest National Monument, 425f.
HAMILTON, George T.: "Resurgence of the Fisher in New Hampshire", 485ff.; note on rescue on Mt. Washington, 567f.
Handbook of Wilderness Travel (Wells), reviewed, 293.
Hannibal's crossing of the Alps, book on, reviewed, 432.
Hardy, Norman, *In Highest Nepal,* reviewed, 579f.
HARDY, Ruth G.: "Conservation Record of the 84th Congress", 274f.; "Pedestrian Bridge over the New York Thruway", 271f.; "Two Proposed Amendments to the New York State Constitution", 275f.; book reviews, 293, 438, 582.
Harmsworth, Mt. (Antarctica), 390.
HARRIS, Stuart K., book reviews, 439, 440.
Harvard Mountaineering Club, first-aid cache in Huntington Ravine, 98.
HATCH, Benton L.: ed. "Up the Magalloway River in 1861", 457ff.; note on camping conditions in Glacier Park, 547ff.; book reviews, 115f., 117f., 124, 126, 285f., 288, 294ff., 430f., 433f., 578ff.
HATCH, Robert McConnell: "Hawks and Owls Win in Connecticut", 105f.; "A Lean-to in the Mountains", 173ff.; "The Inquisitive Bear", 479ff.
Heermance, Camp, building of, 538ff.
Heermance, Edgar L., 538ff.
HENDERSON, K. A.: "Flight to Yesterday", 153ff., 344ff.; obituary of J. W. A. Hickson, 384f., of Emil Huber, 385f.; Alpina notes, 81ff., 239ff., 244ff., 387ff., 522f.; notes on national parks and Park Service, 110f., 277f., 424; on deaths of Josephine D. Peary, 111, and R. A. Daly, 549; on wildlife protection in the Soviet Union, 277; on the Icelandic Tourist Association, 279f.; on repairs to the Old Man, 546; on Adirondack heights, 551; on the Mt. Washington Cog Railway, 543; book reviews, 125, 288, 296, 431f., 434f., 436, 440.
Herdhubreidh (Iceland), 344ff.
HICKS, G. Clifford, obituary of Benjamin L. Hadley, 79f.
Hickson, J. W. A., obituary of, 384f.
High Mountains (Meade), reviewed, 429f.
Hill Country (Texas), outing opportunities, 90.
Hillary, Sir Edmund, and George Lowe, *East of Everest,* reviewed, 286.
Himalaya: climbs and expeditions in, 1ff., 83ff., 181ff., 244ff., 393f., 522; climbing conditions in, 453ff.; Nepalese climbing regulations, 393; walking trips in, 47ff., 329ff.; books on, reviewed, 114ff., 126, 285ff., 295f., 438f., 577ff.
Himalayan Tea Garden (Fletcher), reviewed, 438f.
HOLMAN, Anna E., book reviews, 289f., 580f.
Holway, Mt. (Selkirks), 222.
Hood, Mt., accident on, 246.
HOPE, Josephine A., note on A.M.C. Scandinavia excursion 1957, 533ff.
Horn, The (Kilkenny), 523f.
Horned Moon (Stephens), reviewed, 117.
House on Nauset Marsh, The (Richardson), reviewed, 123.
HOUSTON, Charles S., "The National Ski Association Training Camp" at Aspen (Colo.), 402.
Howarth, David, *We Die Alone,* reviewed, 291.
Howson, Mt. (B. C.), accident on, 570.
Howson Range (B. C.), climbs in, 388.
Hraundrangi (Iceland), 160f.

Hu, Shiu-Ying: "Climbing the Trails of the Giant Panda", 164ff.; note on the Harvard and Radcliffe Botanical Club in the White Mountains, 252.
Huber, Emil, obituary, 385f.
Hudson Bay, excursion to, 535ff.
Hudson, John B., note on forest-fire fighting in Rhode Island, 545.
Hudson River, canoeing, 532f.
Huntington Ravine: rock climbing, 74f.; winter climbing, 75ff.; first-aid cache, 98; accident in, 406f.
Hurd, Marjorie: "The Bay Circuit", 276f.; other conservation notes, 421f., 425, 543ff.; book reviews, 122, 287f., 292.
Hurley, Edward D.: "Skiing Developments at the Belknap Area", 92; "Three-Year Water Resources Study Plan", 108f.; book reviews, 123, 125, 293f.
Hvannadalshnúkur (Iceland), 347ff.

Ice-axe belay, 12ff.
Iceland, climbs in, 153ff., 344ff.
Iceland Tourist Association, 279f.
Icelandic Tourist Society, Yearbooks, reviewed, 296.
Iconoclast, Mt. (Selkirks), 223.
Idaho, pack-train trip in, 368ff.
In Highest Nepal (Hardie), reviewed, 579f.
International Geophysical Year, 57f., 241f., 389f., 523.
International Himalayan Expedition 1955, 83.
Introduction to Mountaineering (Smith), reviewed, 581f.
Introduction to Mountaineering (Styles), reviewed, 294f.
Ireland, book on mountains of, reviewed, 122.
Izalco (Salvador), 388.
Iztaccihuatl, geological studies at, 272f.
Izzard, Ralph, *The Abominable Snowman,* reviewed, 115.

Jackson, Monica, and Elizabeth Stark, *Tents in the Clouds,* reviewed, 287f.
Jackson, N. H.: history, 416f.; walks in, 524ff.
Jacques Cartier, Mont, 249ff.
Jamieson, Paul F., "Emerson's Transcendental Mountain", 313ff.
Jefferson, Mt., Camp Crawford, 102f.
Jewell, H. S., note on proposed Mt. Washington railway and disappearance of Keenan, 556ff.
Jim Liberty Shelter (Mt. Chocorua), 502f.
John Burroughs' America, reviewed, 124.
Jordan, Franklin I., obituary, 383f.
Josselyn, John, on fauna of New England, 427f.

K2: 1939 expedition to, 60ff.; ice-axe belay on, 12ff.; book on, reviewed, 286f.
Kangchenjunga, books on, reviewed, 115f., 285, 430.
Kangchenjunga (Tucker), reviewed, 115f.
Kangchenjunga Challenge (Bauer), reviewed, 285.
Kangchenjunga, the Untrodden Peak (Evans), reviewed, 430.
Karakoram, see under Himalaya.
Katahdin, roads to, 272.
Kauffeld, Carl, *Snakes and Snake Hunters,* reviewed, 440.
Kearsarge North, Mt.: history of name, 511ff.; A.M.C. reservation on, 211f., 214.
Kearsarge, naming of the cruiser, 515f.
Kebnekajse (Sweden), 243.
Keenan, John N., disappearance of, 327, 556f.
Kibby Mountain (Me.), 397f.
Kilbourne, Frederick W., obituary of Bessie L. Crane, 383.
Kimball, Richard W., "We Can Get Along Without You, Mr. Harrell", 342f.
King, Harry C.: note on White Horse Ledge, new route, 85; on self-drilling expansion bolt, 86f.
King Ravine, snowshoe climb (verse), 27f.
Krafla (Iceland), 162f.
Krug, Charles S.: "The Mianus River Gorge", 107f.; "Connecticut Bushwhack", 398ff.

Ladies Scottish Climbing Club Expedition to the Himalaya, 84.
Lafayette, Mt., plane crash on, 405f.
Lahul, climbs in, 181ff.
Land of the Sherpas, The (Maillart), reviewed, 433f.
Lead-Mine Bridge Reservation, 212, 214.
Lee, W. Storrs, *The Green Mountains of Vermont,* reviewed, 292.
Lewis, Frank N., note on August Camp 1956, 260f.
Leve, A. Aaron, death of, 94ff.
Lhotse, first ascent, 244.
Little Hekla (Iceland), 159.
Living Sea, The (Crompton), reviewed, 440.
Lodhmundur (Iceland), 155ff.
Log Cabin (Mt. Adams), 101.
Lonely Challenge (Buhl), reviewed, 431.
Long Trail (Vermont), 278, 412; guidebook reviewed, 125f.
Long Walk, The (Rawicz), reviewed, 295f.
Long, William J., *Wings of the Forest,* reviewed, 582.
Lost Arrow (Yosemite), 445ff.
Lougee, Richard J., "Tophet Chasm", 15ff.
Loveday, Lydia, note on Hudson River canoeing, 532f.
Lunn, Sir Arnold, "Scheidegg Memories", 297ff.
Lunn, Sir Arnold, *Zermatt and the Valais,* reviewed, 121f.
Luster, Peter K. and others, note on accident in Huntington Ravine, 406f.

McCarthy, Albert H., obituary, 381f.
Machapuchare, first ascent, 453ff.
MacInnes, Duncan A., book review, 123f.
McClintock, Belle, note on raccoons, 542.
McIlvaine, Diana, "Down the Gatineau", 50ff.
McIver gravestones in Crawford Notch, 542f.
McKee, Christopher, "Thoreau's First Visit to the White Mountains", 199ff.
McKinley, Mt.: altitude of, 240f.; climbing on, 240, 387; book on, reviewed, 119.
Madison Spring Reservation, 211, 214.
Magalloway River in 1861, 457ff.
Magnone, Guido, *The West Face,* reviewed, 290.
Maher, Francis and Roioli Schweiker, note on cave exploration, 404f.
Maillart, Ella, *The Land of the Sherpas,* reviewed, 433f.
Maine: mountains and climbs in, 88ff., 248f., 397f., 498ff.; trail conditions in, 278f., 413; skiing in, 253; canoeing, 254ff., 457ff., 530ff.; roads to Katahdin, 272.
Makalu (Franco), reviewed, 577f.
Maker, F. R.: notes on trail maintenance, 101f., 271; on Ethan Pond Shelter, 537f.
Malaguerra, John L., book review, 292.
Malubiting (Himalaya), 6ff.
Manaslu (Himalaya), first ascent, 244.
Mansfield, Mt., cave exploration, 404f.
Mapping the World (Raisz), reviewed, 436.
Marcy, Mt., winter ascent, 405.
Markus, Frederick E., book review, 436f.
Marlow, George F., *Byroads of Old New England,* reviewed, 440.
Maroon Bells (Colo.), accident on, 260, 265f.
Maroon Lake (Colo.), August Camp at, 259ff.
Marshall, Robert, *Arctic Wilderness,* reviewed, 291.
Martes Pennanti (fisher) in N. H., 485ff.
Martha, Mt. (Selkirks), 222.
Martin, Lawrence, obituary, 78.
Massachusetts: trail conditions in, 412; state parks, 423f.
Masters, John, *Far, Far the Mountain Peak,* reviewed, 584.

Matterhorn, 225ff.
Mazière, Francis, *Expedition Tumuc-Humac,* reviewed, 119f.
Meade, Charles F., *High Mountains,* reviewed, 429f.
Men Against Everest (Shipton), reviewed, 285f.
MERRILL, Walter C.: "The Bulge and the Horn", 523f.; "The Four-Thousand Footer Club", 526.
Merrimack River: trip after Thoreau, 24ff.; flood control compact, 544f.
MESERVE, Arthur L., Crawford Notch bear story, 111ff.
Metacomet-Monadnock Trail, 278, 412.
Mianus River Gorge, 107f.
Michelson, Mt. (Alaska), 508ff.
Middle Cathedral Rock (Yosemite), 447ff.
Migot, André, *Tibetan Marches,* reviewed, 119.
Mirror Lake (Jackson, N. H.), 525.
Mischief in Patagonia (Tilman), reviewed, 580f.
Mission 66, 110f., 425, 544, 546.
Moated Mountain, The (Styles), reviewed, 118.
Moloch, Mt. (Selkirks), 222.
Monadnock, 313ff.
MONAHAN, Robert S.: "State Operation of the Mt. Washington Summit?", 101f.; obituary of William B. Greeley, 382; note on N. H. conservation bills, 423; book review, 291f.
Mont Blanc: tunnel under, 392f.; accident on, 408ff.; book on, reviewed, 288.
Mont Blanc Range, aerial tramway, 81.
Mont Blanc to Everest (Rébuffat), reviewed, 288.
Montagne, La (ed. Herzog and others), reviewed, 123.
MOORE, Terris, book review, 291.
More than Mountains (Jackson), reviewed, 115f.
MOREY, Florence, note on Davis Path, 417.
MORIN, Ian, "The Oxford Expedition to Greenland, 1956", 390ff.
Morin, Micheline, *Everest,* reviewed, 285f.
Mountain World, The, 1955, reviewed, 114; *1956-7,* reviewed, 578f.
Mountains of Ireland, The (Pochin Mould), reviewed, 122.
Mountaineering: technique, 12ff.; analogy with production, 417ff.; books on technique, reviewed, 294f., 437, 581ff.
Mowery, William B., *Swift in the Night,* reviewed, 291f.
Murphy Fellowship, 109.
Mustagh Ata (Pamir), 394ff.
Mustagh Tower, first ascent, 245.

Nanga Parbat Pilgrimage (Buhl), reviewed, 285.
Narragansett Chapter, 412.
Narratives of Exploration and Adventure (Frémont), reviewed, 434f.
National Parks and Monuments, 239, 544, and see Contents—Notes.
National Ski Association, Aspen training camp, 402.
National Speleological Society, field trip, 404f.
National Wilderness Preservation System, 275, 421f.
National Wildlife Refuge (Fla.), 544.
Natural history, 164ff., 485ff.; books on, reviewed, 123f., 291f., 438ff., 582.
Nepal, see Himalaya.
New England Trail Conference, annual meeting 1956, 278f.; report of trail conditions 1957, 412f.
New Hampshire: recreation facilities in, 545f.; resurgence of fisher in, 485ff.; book reviewed, 293f. See also White Mountains.
New Hampshire State Library, *Books about New Hampshire,* reviewed, 293f.
New Hampshire Town Papers, quoted, 576f.
New York, book on canoeing, reviewed, 292.
New York Chapter, 99f., 258, 276.
New York Thruway, bridge over, 271f.
NICHOLS, Robert L., obituary of Richard E. Byrd, 386.
NIELSEN, Lawrence E., "Climbs in the Central Chugach Mountains, Alaska", 491ff.
Nocturne Tower (Cascades), 240.
Northern Cascades primitive area, 419ff.
MORTON, Thomas, on fauna of New England, 427.
Norway: climbs and walks in, 251f., 533ff.; book on, reviewed, 291.
NOYCE, Wilfrid, "Large and Small Giants of the Himalaya", 453ff.

Obstacle Peak (Selkirks), 222.
Ojos del Salado (Andes): climbed, 82; altitude of, 82, 241f., 388f.
O'Kane, W. C., *Beyond the Cabin Door,* reviewed, 582.
Old Man of the Mountains, repairs to, 546.
Olson, Sigurd F., *The Singing Wilderness,* reviewed, 439.
OLTON, Percy T., book review, 581f.
On Climbing (Evans), reviewed, 437.
ORCUTT, Philip D., book review, 119f.
ORNE, Harold I., obituary of Franklin I. Jordan, 383f.
Ortenburger, Leigh, *A Climber's Guide to the Teton Range,* reviewed, 295

Palisade Mountain (Selkirks), 224.
Palmedo, Roland, *Ski New Horizons,* reviewed, 437.
Panda, giant, 164ff.
Parsons Reservation, 211, 214.
Pasture Path (Randolph, N. H.), 30.
Peary, Josephine D., death of, 111.
Pelican in the Wilderness (Darling), reviewed, 438.
PENNYPACKER, Joseph W., "Snowshoe Climb" (verse), 27f.
Pequawket, Mt. (Kearsarge North), history of name, 511ff.
Perch, The (Mt. Adams), 193f.
PERKINS, Frederick B., attempt on Washington in 1854, 572ff.
PERLMUTTER, Bert M., on death of T. H. Flint, 561f.
Petrified Forest National Monument, 425f.
PHILLIPS, Walter H., notes on Cardigan Ski Patrol, 92, 400.
Picture History of Mountaineering (Clark), reviewed, 433.
Pigwacket Hill, its identification, 517ff.
Pine Mountain, old path on, 30.
Pingora (Wind River Range), 38.
Pinguicula vulgaris, 103f.
Pinkham Notch Camp, new telephone at (verse), 342f.
Pleasant Mountain (Me.), A.M.C. reservation on, 213f.
Pochin Mould, D. D. C., *The Mountains of Ireland,* reviewed, 122.
Poplar Tavern (Newry, Me.) in 1861, 460.
POST, John, book review, 290.
Pough, R. H., *Audubon Western Bird Guide,* reviewed, 439.
Prince Charles Mountains (Antarctica), 390.
Prospect Farm (Jackson, N. H.), 525.
Purcell Range (B. C.), climbs in, 388.
PUTNAM, William Lowell: "The First Live Telecast of Skiing", 92f.; "More Peaks and New Routes of the North Selkirks", 218ff.
Pyles, Hamilton K., appointed Regional Forester, 280.
Pyramid Lake and peaks (Wind River Range), 39.
Pyramid Peak (Himalaya), 5ff., 84.

Raccoons in Randolph, N. H., 542.
Ragged Mountain (Camden, Me.), A.M.C. reservation on, 213f.
Rainier, Mt.: new route on, 240; altitude of, 239; accident on, 247.
RAISZ, Erwin: sketch by, 20; book reviews, 435f., 582f.
Raisz, Erwin, *Mapping the World,* reviewed, 436.

Ramblers Association (of England), 527f.
Randolph, N. H.: paths in, 29f.; old days at, 190ff.
Randolph Mountain Club, 278.
Ranlett, John, note on Gale River slide and flood of 1954, 413f.
Rapid River (Me.), canoeing, 530ff.
Ravine House (Randolph, N. H.), 197f.
Rawicz, Slavomir, *The Long Walk*, reviewed, 295f.
Rébuffat, Gaston: *Mont Blanc to Everest*, reviewed, 288; *Starlight and Storm*, reviewed, 432f.
Reid, Christine L., on deaths of O. J. Schmidt and Tom Bourdillon, 280.
Rentoumis, George, "Canoeing Aspects of the Green River Trip", 263f.
Rhode Island: trail conditions in, 278, 412; forest-fire-fighting organization, 545.
Rhododendron Reservation (Fitzwilliam, N. H.), 213f.
Richards, I. A., review of *High Mountains* (Meade), 429f.
Richardson, Lyman, *The House on Nauset Marsh*, reviewed, 123.
Road to Rakaposhi (Band), reviewed, 117f.
Rock climbing: trip accounts, 74f., 441ff., and see Contents—Notes; equipment, 86f.; technique, 441ff.
Rockies, U.S.: climbs and walks in, 36ff., 56ff.; pack-train trip in, 357ff.; August Camp in, 259ff.; accidents in, 265f., 568f.; books on, reviewed, 125, 295, 434f. See also National Parks.
Rockwood, Alan C., note on walking trips in Europe, 527f.
Rogers, Nathaniel Peabody: "Horace Fabyan Winds his Horn", 281; "On Horseback up Mt. Washington in 1837", 281ff.
Rohtang Pass (Himalaya), 47ff., 184.
Route-Mapping and Position-Locating in Unexplored Regions (Filchner, etc.), reviewed, 582f.
Rumford Whitecap (Me.), 88.
Russell, Francis, "The Concord and the Merrimack: A Voyage after Thoreau", 24ff.

St. John River (Me.), canoeing, 254ff.
St. Lawrence River, canoeing, 301ff.
Salmon River (Idaho), boat trip, 481ff.
Sawers, Mary B., "Connecticut Chapter Forms Conservation Committee", 106f.
Sawyer, Donald F., "An Early A.M.C. Trail Crew", 540ff.
Sawyer, Fred, note on canoeing the Upper St. John River (Me.), 254ff.
Sawyer, Mary Jane: "The First Eastern White-Water Slalom Championship", 258; book review, 291.
Saunders, John and Laura: "Three Mountains in Western Maine", 88f.; "Jackson Revisited", 524ff.
Scandinavia, A.M.C. excursion to, 1957, 533ff. See also Norway and Sweden.
Scheidegg, Kleine, 297ff.
Schmidt, Otto J., death of, 280.
Schoening, Pete, "Ice-Axe Belay", 12ff.
Schoodic Mountain (Me.), 498ff.
Scott, Louise, "Sheep Country in May", 376f.
Screw Augur Falls, 460.
Seeing America's Wildlife (Butcher), reviewed, 123f.
Selkirks, climbs in, 218ff., 388
Serrallier, Ian, *Everest Climbed*, reviewed, 126.
Shadow Lake Towers (Wind River Range), 36f., 39f.
Sherpa and the Snowman, The (Stonor), reviewed, 115.
Sherwin, Helen, note on A.M.C. excursion to Hudson Bay, 535ff.
Shipton, Eric, *Men Against Everest*, reviewed, 285f.
Siege of Nanga Parbat, The (Bauer), reviewed, 285.
Sierra Nevada (Calif.), climbs in, 441ff.
Sierra Nevada de Santa Marta (Colombia), climbs in, 388.
Singing Wilderness, The (Olson), reviewed, 439.
Ski New Horizons (Palmedo), reviewed, 437.
Skiing: trip accounts, 21ff., 75ff.; book on, reviewed, 437. See also Contents—Notes.
Sky Pond Reservation, 212, 214.
Smith, George A., *Introduction to Mountaineering*, reviewed, 581f.
Smith, Roger G., "Two Sailors Tackle the Matterhorn", 225ff.
Snaefellsjökull (Iceland), 351f.
Snaekollur (Iceland), 155ff.
Snakes and Snake Hunting (Kauffeld), reviewed, 440.
Snow, Edward K., on death of T. H. Flint, 559f.
Snowdon Biography (Young, etc.), reviewed, 584.
Snowshoe climbing, trip accounts, 27f. (verse), 75ff., 89.
Snyder Brook Reservation, 213f.
Solari, Frank: "Lahul Holiday", 181ff.; "Swedish Lapland", 242ff.
Sorcerer, Mt. (Selkirks), 223.
Sound of White Water, The (Fosburgh), reviewed, 125.
Spare, Romeyn A., obituary of George Ben Utter, 80.
Spirit of Adventure, The (ed. Burnett), reviewed, 290.
Sprague, Edith D., book review, 124.
Spur Cabin (Mt. Adams), 29ff.
Spur Trail (Mt. Adams), 31f.
Starlight and Storm (Rébuffat), reviewed, 432f.
Station, Mt. (Selkirks), 222.
Stephens, Ian, *Horned Moon*, reviewed, 117.
Stevens, Murray H., obituary of Ridsdale Ellis, 78f.
Stritter, Preb, "Family Ski Race", 91f.
Styles, Showell: *Moated Mountain*, reviewed, 118; *Introduction to Mountaineering*, reviewed, 294f.
Sugarloaf Mountain (Benton Range), 524.
Sunday River Whitecap (Me.), 89, 248f.
Supf, Peter, *Flieger Erobern die Berge*, reviewed, 436f.
Swan, Bradford F., note on gravestones in Crawford Notch, 542f.
Sweden, climbs in, 242ff.
Swift in the Night (Mowery), reviewed, 291f.
Swift, Robert: "The British-American Karakoram Expedition 1956", 245f.; "Class VI Climbing in Yosemite Valley", 441ff.
Swiss Alpine Club, Association of American Members, 279.
Swiss Himalayan Expedition 1956, 83.

Tallman, Louise H., note on Edgar L. Heermance and Camp Heermance, 538ff.
Tara Pahar (Himalaya), 187.
Tension climbing, 441ff.
Tents in the Clouds (Jackson and Stark), reviewed, 287f.
Teton Range (Wyoming): walking trip in, 56ff.; guidebook reviewed, 295; climbing regulations in, 546f.
Thomson, John P., "Ascent of Mt. Michelson, Alaska", 508ff.
Thoreau, Henry D.: trip on Concord and Merrimack Rivers, 24ff.; first visit to the White Mountains, 199ff.; his packer on Mt. Washington, 414ff.; his sister in the White Mountains, 551ff.
Thorington, J. Monroe, book review, 432.
Thorndike, Elizabeth, note on Sugarloaf Mountain (Benton Range), 524.
Tibet, perils of travel in, 85.
Tibetan Marches (Migot), reviewed, 119.
Tichy, Herbert, *Cho Oyu*, reviewed, 430f.
Tidd, Marshall M., "Up the Magalloway River in 1861, Part I", 457ff.
Tierra del Fuego, climbs in, 242.
Tilman, H. W., *Mischief in Patagonia*, reviewed, 580f.
Tobey, Russell B., note on New Hampshire recreation facilities, 545f.
Tophet Chasm (Mass.), 15ff.
Torrey, Charles C., 29ff.
Torrey Path (Randolph, N. H.), 29.
Trail erosion, 353ff.

Tuckerman Ravine: avalanche accident in, 94ff.; winter conditions in, 235ff.
Tumbledown Mountain (Me.), 88f.
Tumbledown Mountain (Selkirks), 221.

Umbagog Lake, 461f.
UNDERHILL, Miriam E.: "In Huntington Ravine", 74f.; "Norway's Highest", 251f.; "Kearsarge North Regains its Name", 511ff.; note on Mont Blanc accident, 408ff.; book reviews, 286f., 432f.
Underhill, Miriam E., *Give Me the Hills*, reviewed, 289.
UNDERHILL, Robert, bear story, 35.
UNDERHILL, Robert L. M.: White Mountain Quiz No. 4, 104f.; No. 5, 266ff.; No. 6, 550f.; note on airlifts for skiers, 528f.; on death of Hermann Buhl, 570f.; book reviews, 120f., 123, 125f., 294f., 437.
Upton (Me.), in 1861, 461.
U.S. Forest Service, see Forest Service, U.S.
Utah, pack-train trip in, 366ff.
Utter, George Ben, obituary, 80.

Valhalla, Mt. (Alaska), 496.
VAN BLARCOM, John, "Production and Mountaineering", 417ff.
Victory over K2 (Desio), reviewed, 286f.
Virgin Islands National Park, 424.
Visit to the Sherpas (Bourdillon), reviewed, 433f.

Waddington, Mt., ascent of northwest peak, 387.
WALES, Ralph H., "To Gosainkund, the Holy Lake", 329ff.
Washington, Mt.: early ascents, 206ff., 281ff., 554f., 572ff.; Thoreau's packer on, 414f.; winter climbing conditions on, 234ff.; trails on, 417; proposed scenic railway, 322ff., 556ff.; State control of summit, 101f., 545f.; accidents on, 94ff., 406f., 556f., 567f.; book reviewed, 293.
Waterbars on trails, 353ff.
We Die Alone (Howarth), reviewed, 291.
Weir, Tom, *East of Katmandu*, reviewed, 118.
Wells, George and Iris, *Handbook of Wilderness Travel*, reviewed, 293.
West Face, The (Magnone), reviewed, 290.
Westfield River, canoeing accident, 257f.
WHEELER, Gerald S.: "Land Use Planning for the White Mountain National Forest", 472ff.; note on Dolly Copp Campground, 411; on new FS trail bridges, 411; on W.M.N.F. personnel, 426.
White Horse Ledge, new rock-climbing route, 85.
WHITE, Sidney E.: Geologic studies of Iztaccihuatl (Mexico), 272f.; book review, 114.
White Mountain National Forest: land use planning in, 472ff.; shelter in Edmands Col, 271; Dolly Copp Campground, 411; trail bridges, 411; personnel notes, 280, 426.
White Mountains: walking trips in, 88f., 173ff., 199ff., 247f., 248f., 252, 316ff., 372ff., 523ff.; 4000-Footer Club, 526; on climbing safely in, 229ff.; winter climbing trips, 75ff., 89; winter climbing conditions, 234ff.; rock climbs, 74f., 85; skiing, 21ff., and see Contents—Notes; airplane flight over, 502ff.; Thoreau's first visit, 199ff.; Thoreau's sister's visit, 551ff.; accidents in, 94ff., 229ff., 264f., 405ff., 559ff., 566ff.; trails and trail maintenance, 29ff., 41ff., 231, 278, 353ff., 524ff., and see Contents—Notes; huts and camps, 29ff., 101, 102f., 271, and see Contents—Notes; roads, railways, hotels, see Contents—Notes; recreation facilities, 411, 476f., 545f.; logging, 477f.; fauna and flora, 35, 103f., 111ff., 173ff., 426ff., 478, 479ff., 485ff., 542; minerals, 478; quizzes on, 104f., 266ff., 550f.; books on, reviewed, 289, 293f., 440. See also White Mountain National Forest, Mt. Washington, and Contents—Montalbaniana.
Whittemore Farm (Wilson's Mills) in 1861, 467.
Wichita Wildlife Preserve, 274f.
WIESSNER, Fritz H., "The K2 Expedition of 1939", 60ff.
Wildcat Mountain Ski Development, 528.
Wilderness Conference, Fifth Biennial, 422.
Wilderness Travel, Handbook of (Wells), reviewed, 293.
Wildlife, see Natural History and White Mountains, fauna and flora.
Willard, Samuel, mention of Pequawket Hill, 517f.
WILSON, David, "August Camp 1956", 259f.
Wilson's Mills (Me.) in 1861, 467, 469f.
Wind River Range (Wyo.), climbs in, 36ff.
Windslab, formation of, 236f.
Wings of the Forest (Long), reviewed, 582.
Winkler, George, body found, 242.
Winnipesaukee Lake, recreational facilities, 545.
Winter on Mount Washington (Bent), reviewed, 293.
Witherspoon, Mt. (Alaska), 494.
WOLF, William, "Deed of Mt. Chocorua" (verse), 44ff.
Wonalancet Out-Door Club, trails, 413.
WOOD, Frank H. and Jeanne M.: "Sunday River Whitecap from the South", 248f.; "Kibby Mountain, Maine", 397f.
WOOD, G. Malcolm, note on *Pinguicula vulgaris*, 103f.
WOOD, William, on fauna of New England, 426f.
Woodman Reservation, 213f.
Worcester Chapter, 412.
WORDEN, Thomas V., note on the Texas Hill Country, 90.
Workman, Fanny B., 10, 84.
WRIGHT, Edgar F., "Armchair over Chocorua", 502ff.

Yearbooks of the Icelandic Tourist Society, reviewed, 296.
Yosemite Valley, Class VI climbing in, 441ff.
Young, G. W. and others, *Snowdon Biography*, reviewed, 584.
YOUNGDALE, Jean M.: "Annual Meeting of the New England Trail Conference" 1956, 278f.; "New England Trail Conference Report of Trail Conditions" 1957, 412f.

Zealand Falls Hut, ski trip to, 21ff.
Zermatt and the Valais (Lunn), reviewed, 121f.

CONTENTS

ARTICLES

PAGE

Sidelights on the Frankfurt Himalaya Expedition of 1955 .... *Oskar Dorfmann* 1
Ice-Axe Belay .... *Pete Schoening* 12
Tophet Chasm, the Drainage Waterfall of Glacial Lake Nashua .... *Richard J. Lougee* 15
Skis to Zealand .... *Nancy W. Collin* 21
The Concord and the Merrimack: A Voyage after Thoreau .... *Francis Russell* 24
Snowshoe Climb, *a poem* .... *Joseph W. Pennypacker* 27
Charles C. Torrey and Spur Cabin .... *Harry B. Adams* 29
Climbs in the Southern Wind Rivers .... *William H. Cropper* 36
Through the Grand Canyon, four sketches . *Mary Ogden Abbott* opp. 40
Ideas Behind the A.M.C. Trail System .... *Charles W. Blood* 41
Deed of Mount Chocorua, *verse* 44
Rohtang Pass .... *Donald F. Carpenter* 47
Down the Gatineau .... *Diana McIlvaine* 50
Two in the Tetons .... *Abigail D. Avery* 56
The K2 Expedition of 1939 .... *Fritz H. Wiessner* 60

Skyline Sketches

In Huntington Ravine .... *Miriam Underhill* 74
Sheep Country in May .... *Louise Scott* 376
My Guide and I .... *Edward Cushing* 377
The Inquisitive Bear .... *Robert McConnell Hatch* 479
A Day on the Middle Fork .... *Thomas J. Glennon* 481
Flight to Yesterday .... *Kenneth A. Henderson* 153, 344
Sketches by Mary Ogden Abbott
Climbing the Trails of the Giant Panda .... *Shiu-ying Hu* 164
A Lean-to in the Mountains .... *Robert McConnell Hatch* 173
Sketches by Mary Ogden Abbott
Lahul Holiday .... *Frank Solari* 181
Memories of Randolph .... *Hazel de Berard* 190
Sketch by the author
Thoreau's First Visit to the White Mountains .... *Christopher McKee* 199
The Club Reservations .... *Charles W. Blood* 210
Leaves from a Climber's Sketchbook .... *Oskar Dorfmann* 216
More Peaks and New Routes of the North Selkirks .... *William Lowell Putnam* 218
Two Sailors Tackle the Matterhorn .... *Roger G. Smith* 225
Sketch by Barbara Bradford
Climbing Safely in the White Mountains: *An Interview with Joe Dodge* 229
Scheidegg Memories .... *Sir Arnold Lunn* 297
Running the Big Sault in an Open Canoe .... *Homer L. Dodge* 301
Emerson's Transcendental Mountain .... *Paul F. Jamieson* 313
Trolley on the Presidentials .... *C. Francis Belcher* 320
To Gosainkund, the Holy Lake .... *Ralph H. Wales* 329
Sketches by Mary Ogden Abbott
We Can Get Along without You, Mr. Harrell *Richard W. Kimball* 342
Trail Erosion .... *Charles W. Blood* 353
Improbable Interlude .... *Mary Ogden Abbott* 357
Sketches by the author
A Night Out on Mount Adams .... *Leroy D. Cross* 372
Class VI Climbing in Yosemite Valley .... *Robert L. Swift* 441
Large and Small Giants of the Himalaya .... *Wilfrid Noyce* 453

PAGE
Up the Magalloway River in 1861, Part I ...... *Marshall M. Tidd* 457
Sketches by the author
Land-Use Planning for the W.M.N.F. .... *Gerald S. Wheeler* 472
Resurgence of the Fisher in New Hampshire *George T. Hamilton* 485
Climbs in the Central Chugach Mountains in Alaska .... *Lawrence E. Nielsen* 491
Schoodic Mountain, Maine .... *Charles B. Fobes* 498
Armchair over Chocorua .... *Edgar F. Wright* 502
Sketches by the author
Ascent of Mount Michelson, Alaska .... *John P. Thomson* 508
Kearsarge North Regains its Name *Arranged by Miriam Underhill* 511

IN MEMORIAM

Lawrence Martin .... *Irving B. Crosby* 78
Ridsdale Ellis .... *Murray H. Stevens* 78
Benjamin L. Hadley .... *G. Clifford Hicks* 79
George Ben Utter ....*Romeyn A. Spare* 80
Albert H. MacCarthy .... *Henry S. Hall, Jr.* 381
William B. Greeley .... *Robert S. Monahan* 382
Bessie Louise Crane .... *Frederick W. Kilbourne* 383
Franklin I. Jordan .... *Harold I. Orne* 383
Joseph William Andrew Hickson ...... *Kenneth A. Henderson* 384
Emil Huber .... *Kenneth A. Henderson* 385
Richard Evelyn Byrd .... *Robert L. Nichols* 386

VARIOUS NOTES

Alpina 81, 239, 387, 522
Rock Climbing 85
Climbing in General 87, 247, 397, 523
Skiing 90, 252, 400, 528
Canoeing 254, 403, 530
Cave Exploration 404
Excursions 93, 259, 533
Accidents 94, 264, 405, 559
Huts, Camps and Trails 99, 268, 411, 537
Roads, Railroads and Hotels 100, 272, 542
History 102, 413, 551
Science 103, 272, 417, 551
White Mountain Quizzes 104, 266, 550
Conservation 105, 274, 419, 543
National Parks and Monuments 109, 277, 424, 546
Personal Items 111, 280, 426, 549
Organizations 278
Montalbaniana 111, 281, 426, 572
BOOK REVIEWS 285, 429, 114, 577
ANNUAL REPORTS FOR 1955 127

See Index for specific subjects, for authors of articles, and for titles, authors and subjects of books reviewed.

Cover Illustrations

Saddleback Mountain .... *Franke H. Wood* June, 1956
On Randolph Hill .... *Louise Baldwin* December, 1956
Doubletop, Katahdin Region .... *Andrew B. Fielding* June, 1957
On Monadnock .... *Frank H. Wood* December, 1957